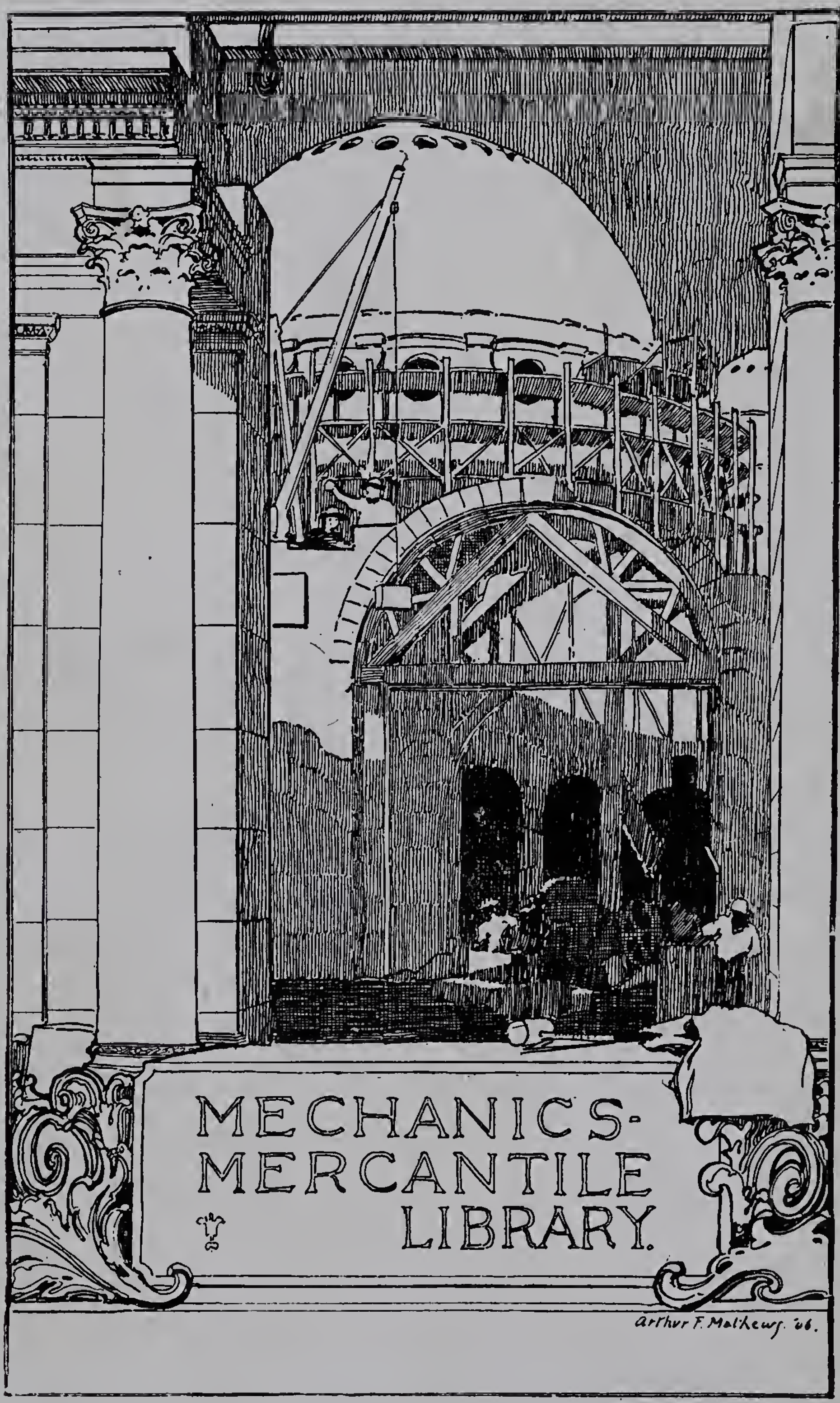
MECHANICS-
MERCANTILE
LIBRARY.
Arthur F. Mathews '06.

REPORT

OF THE

Sixth Industrial Exhibition

OF

The Mechanics' Institute

OF THE

CITY OF SAN FRANCISCO,

Held at the Pavilion of the Institute, Union Square,

FROM THE

8th of August to the 12th of September,

A. D. 1868.

SAN FRANCISCO:

WOMEN'S CO-OPERATIVE UNION PRINT, 517 CLAY STREET,

1868.

The Mechanics' Institute

OF THE

CITY OF SAN FRANCISCO.

ORGANIZED MARCH 29th, 1855.

Building of the Association, No. 29 Post Street.

Library Hours, from 8 A. M. to 10 P. M.

TERMS OF ADMISSION:

Shareholders' Membership,	**$5,00**
Quarterly Dues,	**1,50**
Subscribing Membership, Initiation Fee	**1,50**
Quarterly Dues,	**1,50**

1868.

OFFICERS:

PRESIDENT	A. S. HALLIDIE.
VICE PRESIDENT	JOSEPH R. WILCOX
RECORDING SECRETARY	H. J. HOLMES.
CORRESPONDING SECRETARY	HORACE D. DUNN.
TREASURER	HENRY L. DAVIS.

DIRECTORS:

W. C. PEASE,
ABNER DOBLE,
D. R. COLEMAN,
D. FARQUHARSON,
JACOB BROWNING.
N. D. ARNOT,
JOHN HANCOCK,

MANAGERS OF THE INDUSTRIAL FAIR.

EXECUTIVE COMMITTEE:

A. S. HALLIDIE,
D. R. COLEMAN,
D. FARQUHARSON,
H. J. HOLMES,
JOSEPH R. WILCOX,
N. D. ARNOT,
JOHN HANCOCK.
HORACE D. DUNN,
W. C. PEASE,
ABNER DOBLE,
JACOB BROWNING,
HENRY L. DAVIS.

W. S. STODDART, GENERAL SUPERINTENDENT.

RULES AND REGULATIONS

OF THE

Sixth Industrial Exhibition

OF THE

MECHANICS' INSTITUTE,

SAN FRANCISCO, 1868.

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1. The Pavilion will be opened for the reception of goods on Monday, July 27th. The Exhibition will be opened to the public on Saturday, August 8th.

2. All persons presenting articles to the Exhibition must attend to have them registered, in their turns, by the Receiving Clerk, who will give a receipt for the same, which receipt must be presented when the articles are returned.

3. The name of every article should be attached to it, and also a description, pointing out its merits, when thought desirable by the Board of Managers.

4. Judges will be appointed to examine all articles presented, and the Board of Managers will award Premiums on such articles as the Judges shall declare most worthy, which will be delivered as soon as they can be prepared. Premiums will be announced on the last day of the Exhibition.

5. The mornings of each day, until 10 o'clock, will be appropriated to the Judges, and no visitors will be admitted during the time thus appropriated, except at the special request of the Judges, or by permission of the Board of Managers.

6. In case of any misunderstanding, application may be made to the Managers of the day, who will at all times be in attendance.

7. Articles intended for sale will be labeled accordingly, but cannot be removed until the close of the Exhibition, except by written permission of the Managers.

8. Steam power will be provided, that machinery of all kinds may be seen in actual operation; and every facility possible will be given to exhibit all working machinery to the best advantage.

9. Proof of origin must be furnished when required.

10. It is particularly requested that every person who offers a new machine or improvement, will leave with the Managers a description of its merits, that the attention of the Judges may be called thereto.

11. Perishable articles will be received, or may be removed at any time during the Exhibition with the consent of the Managers.

12. The most effectual means will be taken, through the agency of the Police and otherwise, to guard and protect the property in the Exhibition; and it will be the purpose of the Managers that all articles shall be returned to the owners without loss or injury. Still, all articles deposited will be *at the risk of the owners*.

13. The Managers are desirous that articles should be presented early; and should they arrive from a distance before the opening of the Exhibition, they will be stored free of charge in the Fair Building.

14. Articles intended for exhibition and *Premiums* must be entered on or before Wednesday, August 12th.

15. All goods intended for exhibition can be forwarded to the care of W. J. Stoddart, Industrial Fair Building. No freight charges will be paid by the Institute; but exhibitors are notified that arrangements have been made with the San Jose and San Francisco Railroad, and California Steam Navigation Company, to repay freight charges on evidence of return of goods exhibited.

D. R. COLEMAN,
H. J. HOLMES, } Committee.
J. BROWNING,

Report of the Board of Managers

OF THE SIXTH INDUSTRIAL EXHIBITION OF THE MECHANICS' INSTITUTE OF THE CITY OF SAN FRANCISCO.

To the Members of the Mechanics' Institute of the City of San Francisco:

GENTLEMEN: Herewith we beg to submit our report of the proceedings connected with the Sixth Industrial Fair held by your Society in accordance with a resolution passed the 18th of March, 1867.

Your Directors, as soon as possible, after taking office, proceeded to obtain the necessary finances to erect a building for the holding of the proposed Fair, and on the faith of the success of the Fair, and net receipts therefrom, obtained, loans to the amount of $25,400, under the following agreement:

> SAN FRANCISCO, April 22d, 1868.
>
> We, the undersigned, agree to pay to the order of the President of the Mechanics' Institute of San Francisco, by the fifteenth day of June next, the amounts in U. S. Gold Coin, set opposite our names, respectively. Said moneys to be expended under the management of the Board of Directors of the Mechanics' Institute, for the purpose of erecting the necessary building for holding the proposed Industrial Fairs of 1868 and 1869. Said amounts are loans, to be refunded to us in like U. S. Gold Coin, from the net receipts of the Fair of 1868, and immediately after its close; and in the event of any deficiency, the balance to be paid from the net receipts of the Fair of 1869, and immediately after its close.

For the names of those who subscribed to the above, we beg to refer you to Treasurer's Report herewith appended.

The readiness with which these loans were taken up was a source of great strength to your Board, guaranteeing your Society against the possibility of pecuniary loss, and encouraging your Directors in the arduous task before them.

In projecting a great enterprise like the late Fair, necessarily everything had to be carefully considered, in the prospects of success.

The Board of Supervisors had generously given to your Society the free use of Union Square for the period of two years, and without some such liberal concession the pecuniary success would have been doubtful, as your Third Fair proved.

The Mechanics' Institute had never asked for or received State or Municipal aid, other than above stated; but during the session of the late Legislature, it was thought that in view of the great good which it had done in the developing of the industrial interests of the State, it might surely ask for an appropriation of money to be expended in premiums and awards to exhibitors at the Sixth Fair, as an incentive to their efforts in making a proper and legitimate display.

The Committee of Ways and Means of the Assembly would have recommended an appropriation of $10,000 for the purpose named, but being informed, by parties totally unauthorized by your present Board of Directors, that your Society did not need it, struck it out from the Appropriation Bill at the last moment, thereby giving your Directors no opportunity to correct the misrepresentation; and so your Society was cast off from all hopes of assistance from the State. Your Board, however, felt, acting under instructions from your Society and the desire of the public, supported by the pecuniary aid of the many friends of the Mechanics' Institute, and having the free use of an excellent site for building, that failure was an impossibility and that success must crown its efforts.

Having determined the area necessary for the proposed Exhibition, plans for a suitable building were advertised for, and a premium of $250 offered for the successful one, which proved to be that of Mr. William Patton, whose plan was adopted, and for which the premium was paid.

The general outline of the building was as follows : Main building 277x180, subdivided into a nave 277x80, with a circular ribbed roof, 80 feet clear span and 68 feet high, flanked on each side by an aisle 277x50, and galleries 22 feet above the floor, 10 feet wide, each side of nave, 32 feet wide on east end, and 16 feet wide on west end of nave. The west end of the building had a Picture Gallery, 205 feet long, and 30 feet wide, lighted by frosted window sashes from roof.

Attached to east end of the building were two rooms, each 35x60, used respectively for a Music Room and a Restaurant, with necessary Committee Rooms, etc.

On the north end of the building were the Boiler House and Agricultural Department 100x30. The entire building covered an area of 65,000 feet, in addition to which were the galleries, as before stated, having an area of about 8,000 feet more. The general arrangement for light and ventilation was admirable, and all that could be wished.

It was not until the 27th of April last that your Board were fully empowered to proceed with the work of the Fair, and, at a meeting held soon after, it was determined to organize a Board of Managers, consisting of all the elected officers of the Society, as heretofore, but whose proceedings must be subject to the action of the Board of Directors before becoming binding on the Society, in accordance with the Rules and By-laws of the Mechanics' Institute.

It was then so late that no mill owner or agent would contract to furnish the necessary lumber and timber, direct from the mill, for the erection of the building in time for the opening, and consequently the material had to be purchased here. Work was commenced under the direction of the Building Committee on the 28th of May, Mr. John Dickson being engaged as Superintendent, and was pushed vigorously forward to date of completion—the 28th of July—sixty days being consumed in its construction, and at a cost of $30,000.

The building was substantial in every respect—thoroughly lighted throughout by means of glass sashes, and covered with an excellent water-tight roof (shingles) ; the general verdict being that the structure was a credit to both architect and constructor.

The Board were disappointed in not being able to obtain the loan of a suitable boiler and shafting as heretofore. This compelled the Board to have them manufactured expressly for this and the next Fair ; two 16x4 feet boilers, with all fixtures, connections, shafting, pulleys, etc., complete, and which are now in excellent and complete running order for the next Industrial Fair, involving, however, an outlay of $5,000 in all, over and above what was anticipated.

According to the announcement, made in April last, the Fair was opened at 11 A. M., August 8th, with proper and appropriate ceremonies. Rev. Horatio Stebbins offering a fervent prayer, the opening address being delivered by the Hon. Newton Booth, (and which we submit to your careful attention, it being herewith appended) followed by singing by the children of the Public Schools.

During the first four days exhibitors were behind as usual, but all the available space was taken and filled the first week.

The attendance of visitors was large, although the alarming prevalence of smallpox in the city had the effect of visibly affecting the attendance from the interior, and consequently the receipts at the door.

The receipts were, however, satisfactory, as will be seen on examination of the Treasurer's Report annexed.

The number of exhibitors exceeded 900, being larger than ever before ; and the Board feel that in the numerous and extensive displays of manufactures of general utility, inventions, articles of taste, art and science of California, that the late Exhibition has shown an unusual great progress made by our people since the last Fair was held in 1865. The late Exhibition has clearly demonstrated that our workshops and manufactories are not only capable of supplying the wants of our own people, in most part, but that the extensive markets that are about being made easily accessible in the interior of the continent, through the extension of the Pacific Railroad eastward, will draw most of their supplies from California, and for a largely increased and growing population.

Events already occurred demonstrate most clearly that the manufacturing interests of California are about entering on a new and enlarged era of prosperity, that in a few decades will make her, in all that constitutes the material wealth of a country, the richest and most prosperous State in the Union. Providence seems to have especially favored, and placed her in the most eligible location from whence to supply, with manufactures and other products of a civilized people, the nations less gifted on the shores of the Pacific. While the harbor of San Francisco is extensive and admirably adapted to accommodate the fleets of the world, the peculiar climate of the locality gives advantages to mechanics and manufacturers that have no known rival elsewhere. Where nature has been so bountiful, so far, man has nobly done his part, and in the late Exhibition given conclusive proof that as opportunities arise they will be taken advantage of by our people, whose progress in all branches of mechanics, manufactures, invention, and arts and sciences, are, under the circumstances of time and origin, a marvel to all who beheld them.

It is with no spirit of egotism that the Board of Managers claim for your Institute a large share of the credit that attaches to the favorable condition of manufactures, mechanics, etc., in this State. The late Industrial Exhibition and its predecessors have done much to stimulate the development of all the practical industries, and with the exception of progress in agriculture, the Fairs held by your Association have done more than all other Exhibitions or Fairs held in California since her admission to the Union. For this result, the people of the State have to thank the enterprise of the members of the Institute, who have had the public spirit to assume large pecuniary risks in the holding of Industrial Exhibitions, with no prospect of personal gain. Your Association has now held six Fairs in San Francisco, involving very large outlays of money and time of members, without one dollar of aid from the State to stimulate manufacturers, mechanics, or inventors, by the bestowal of valuable pecuniary premiums. With such a record of usefulness, unaided by subsidies or gifts, the members of your Association have a right to feel proud of the past. They have, also, a right to look hopefully forward to the future for a continuance of their high reputation, so honorably earned, feeling assured that the efforts they have made, and will yet make, will hold a high place in the history of the enterprise and industry of their adopted State.

After running for twenty-five days, benefits were given to the following benevolent and charitable associations : Roman Catholic Orphan Asylum, Ladies' Protection and Relief Society, Protestant Orphan Asylum, Woman's Hospital, and San Francisco Benevolent Societies.

The Board of Managers desire here to bear testimony to the public-spirited gentlemen and incorporations who so generously assisted them by temporary loans, without interest or security, so as to discharge all liabilities for lumber, labor and other material as they were incurred in the erection of the building. They also desire to return the thanks of the Institute to the Press of this city for manifold favors received and to the public at large for the generous support shown by their approbation and attendance at the Fair.

Since the close of the Fair the building on Union Square has been let at times for various purposes, and the Board of Managers have given two balls. The floor of the nave of the building has been covered by another of fine lumber, making it the best dancing hall on the Pacific Coast. Additional commodious galleries have also been built on the north and south sides, which render the building more valuable for many public purposes, and will prove of great convenience at the Fair which it is intended to hold during 1869. The Board of Managers, in the performance of their duties to the Institute, deemed it best to purchase all fittings and furniture needed to place the building in the best condition for holding the late and the proposed next Fair, involving a considerable sum in the aggregate. The building is substantially constructed of good materials, which, when taken down, will sell at a higher per centage on first cost than those in any previous structure built by the Institute for Fair purposes. The strength of the structure was well and satisfactorily tested during the late earthquake, no damage whatever occurring, although the building vibrated severely at the time.

In concluding this report it is proper to state that the Institute now owns a building in perfect condition and equipment for the holding of another Fair; that the expenses of the Fair to be held in 1869 will be confined so as to admit of large pecuniary profitable results to the Institute, and that the material in the building when taken down will be available for many valuable purposes.

The Board of Managers return the thanks of the Institute to Commodore John Carter, of the U. S. Light-House Department; Captain J. M. Selden, of the U. S. Revenue Service, for the loan of large quantities of flags and service of men by which the Fair building was handsomely decorated, being a pleasure to all who visited it; Messrs. Church & Clark for display of Fireworks on the opening night, and to the various Transportation Companies for carrying freight free of charge.

A. S. HALLIDIE, *President.*
JOS. R. WILCOX, *Vice President.*
H. J. HOLMES, *Rec. Secretary.*
HORACE D. DUNN, *Cor. Secretary.*
HENRY L. DAVIS, *Treasurer.*
N. D. ARNOT,

W. C. PEASE,
D. R. COLEMAN,
JOHN HANCOCK,
DAVID FARQUHARSON,
JACOB BROWNING,
ABNER DOBLE.

Treasurer's Report.

MECHANICS' INSTITUTE,
SAN FRANCISCO, December 29, 1868.

To the President and Board of Managers of the Sixth Industrial Exhibition, 1868:

GENTLEMEN: I herewith submit to you the following report of the receipts and disbursements on account of the Sixth Industrial Exhibition of 1868. Also a Ticket Report, showing each class and by whom sold.

In addition to the amount of disbursements there will be bills payable for printing diplomas and filling up the same, for engraving medals, and for compiling and printing the Reports of the Exhibition. The amount of said bills are estimated from $1,000 to $1,200.

Yours, most respectfully,

HENRY L. DAVIS, *Treasurer*.

SYNOPSIS

OF RECEIPTS AND DISBURSEMENTS, SIXTH INDUSTRIAL FAIR, MECHANICS' INSTITUTE, 1868.

RECEIPTS:

From Tickets sold at door	$47,569 08		
From Tickets sold by individuals	7,840 25—	$55,409 33	
From privileges sold		2,993 50	
Amount of deficiency		4,242 53	
		$62,645 36	

DISBURSEMENTS:

For constructing building	$30,633 28
For fitting and decorating	13,624 93
For running expenses during Fair	11,535 68
For contingent expenses	6,851 47
	$62,645 36

BUILDING EXPENSE ACCOUNT.

PLANS—Wm. Patton, plans and tracings	$265 00	
GRADING—Geo. Dougherty, grading lot	250 00	
LABOR—Mechanics' and laborers' work constructing	9,361 73	
Capt. Batchelder, raising heavy timbers and ribs	842 40	
Watchmen, during construction	357 50	
TOOLS—Implements, etc	160 90	
MATERIAL—Blythe & Wetherbee, lumber and shingles	15,401 77	
Conroy & O'Connor, nails and spikes	533 41	
Thos. H. Selby & Co., do do.	425 00	
Isidor Burns, iron work	323 50	
John Hall & Son, window sashes	1,100 74	
D. A. Macdonald & Co., mill work	217 59	
Miller, Haley & Wetmore, do do	251 69	
Marsh, Pilsbury & Co., hardware	70 75	
John Bohn, gutters, sheet lead, etc	79 93	
E. & E. R. Ellery, roofing shed	155 52	
John N. Farnham, spars	84 62	
Sundry hardware	38 05	
Stanyan & Co., hauling lumber	643 18	
Sundry drayages	70 00	
		$30,633 28

FITTING AND PREPARING BUILDING.

LABOR—Police, and mechanics' and laborers fitting up	$2,215 50
MATERIAL—Blythe & Wetherbee, lumber	1,000 00
J. K. Prior, gas fixtures	3,117 05
Thomas Day, water pipe	204 87
A. S. Iredale, lining fountain	160 00
H. M. Rosekrans, painting fountain	64 50
Tay, Brooks & Backus, nozzles for fountain	36 00
Marsh, Pilsbury & Co., hardware	17 87
Will & Finck, lock and keys	9 50
Sundry material	27 43

FITTING AND PREPARING BUILDING (CONTINUED).

DRAYAGE—Stanyan & Co., hauling lumber	$40 00	
Sundry drayages	30 00	
MACHINERY—David Stoddart, two boilers, 16 ft by 48 in flue, smoke stack, etc., complete	2,540 00	
Cousins & Thornhill, setting boiler	343 00	
Stratton Bros., raising smoke stack	50 00	
W. T. Garratt, engine connections	430 45	
Cousins & Thornhill, two engine foundations	499 00	
Vulcan Foundry, shafting, pullies, etc.	1,466 91	
Miner's Foundry, engine foundation	75 00	
A. S. Iredale, oil drippers and lining engine tank	23 25	
D. Stoddart, pump connections	97 50	
Seaman Johnson, caulking tank	21 00—	$12,468 83
FURNITURE—N. P. Cole & Co., chairs	401 00	
Tay, Brooks & Backus, water coolers	22 00	
Frank G. Edwards, window shades	10 00	
Sundries	38 00—	471 60
DECORATIONS—Mrs. E. Nauman, evergreens	20 00	
Estate A. S. Lipman, glass globes	258 00	
A. Crawford & Co., bunting and halliards	181 67	
H. T. Graves, wire netting, steel wire, etc	62 63	
H. D. Dunn, sundry items, rope, etc	15 30	
Alfred Randall, coloring walls of Art Gallery and music room	120 00	
W. J. Stoddart, 45 yds lining	4 50	
W. C. Pease, sundries, expense, acc't	23 00—	685 10
		$13,624 93

RUNNING EXPENSES.

LABOR—Laborers, watchmen and police	$3,142 50	
SALARIES—Clerks and canvassers	1,502 38	
GAS—S. F. Gas Co., gas	2,068 43	
WATER—S. V. Water Co., water	500	
MUSIC—M. W. Willis, music	2,583 25	
DRAYAGE—Sundry drayages and cartages	20	
EXPENSE—Coffin & Standish, exhibiting steam plow	200	
Joseph Neuman, exhibiting silk manf	200	
Coal for engine	305 44	
Damage to wax flowers	55	
Loss of baby skirt	20	
Russell & Erwin Manfg. Co., loan of safe	15	
Sundries as per Day Book	251 31	
PRINTING—Jos. Winterburn, rules and regulations	28	
Towne & Bacon, receipt books and notices	89 50	
B. F. Sterrett, circulars	14	
Mullen, Mahon & Co., blanks and circulars	20	
Ed. Bosqui & Co., treasurer's orders, address, etc	31 75	
Truesdell, Dewey & Co., notices, circulars, etc	250 50	
Dewey & Co., wood cut of pavilion	25	
Valentine & Co., posters	81 50	
STATIONERY—Sundry stationery as per Day Book	162 12	
		$11,535 68

CONTINGENT AND SUNDRY EXPENSES.

Interest and Discount on silver and currency		$493 90
ADVERTISING—Abend Post	52	
Alta California	193	
Bulletin	170 50	
Call	98 50	
Californian	12 50	
California Demokrat	35	
Dramatic Chronicle	29	
Dramatic Review	47	
Figaro	35	
Golden City	20	
Golden Era	20	
Hebrew Observer	10	
Hebrew	59 75	
Independent Dispatch	70 50	
Irish News	15	
Le National	23	
Mining and Scientific Press	18	
Mercury	40	
Monitor	7 50	
Morning Chronicle	17	
National Republican	6	
News Letter	20	
Oakland News	10	
Pacific Weekly	6	
Spectator	7 50	
Times	117	
Barbier & Cushing	10	
Boyce, J. E	55	
Boyce, Thomas	159	
Fisher, L. P	558 50	
Moss, W. S. & Co	65	
McBoden, A	51 50—	2,038 75

CONTINGENT AND SUNDRY EXPENSES (CONTINUED).

MEDALS—R. B. Gray, 17 gold medals		$505		
56 silver medals		170 25		
1 Institute medal (gold)		175		
73 Morocco cases		73 —	$923 25	
INSURANCE—North British & Mercantile		158		
Manhattan		132 25		
Fireman's Fund		132 25		
Imperial Fire & Life		158		
J. D. Hawks & Co.		264 50		
Northern Assurance		158		
Pacific		79 25		
Home Mutual		132 25		
		$1,214 50		
Less policy cancelled N. B. & M.	116 70			
do do do Imperial	111 55—	228 25—	986 25	
NEWSPAPER SUBSCRIPTION—Sacramento Union		1 75		
Alta California		2 50		
Bulletin		1 75		
Times		3 00—	9 00	
RESOURCES OF CALIFORNIA—On acc't premium for best essay on Resources of California			219 50	
Sundries			85 32	
BENEFITS*—R. C. Orphan Asylum		352 25		
Ladies' Protection & R. Society		335 50		
Protestant Orphan Asylum		946 25		
S. F. Benevolent Association		230 75		
S. F. Female Hospital		230 75—	2,095 50	
				$6,851 47

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* Estimated amount of daily expenses—$296 50—deducted from each day's receipts, leaving balances as above.

AMOUNT RECEIVED AS LOANS TO BUILDING FUND.

W. C. Ralston	$ 500
H. Casebolt	500
L. B. Dell	600
Jona. Kittredge	500
Conroy & O'Conner	500
Marsh, Pilsbury & Co.	500
G. C. Johnson & Co	500
C. S. N. Co.	500
R. & E. Manf. Co.	500
Main & Winchester	500
B. & J. S. Doe	500
Dickson, DeWolf & Co.	500
T. H. Selby & Co.	500
S. F. Butterworth	500
F. St. O. & M. R. R. Co	1,000
N. B. & M. R. R. Co.	1,000
S. F. Gas Co,	1,000
R. B. Swain & Co.	500
S. V. Water Co.	1,000
Fireman's Fund Ins. Co	1,000
A. Hayward	500
J. W. Brittain & Co.	500
Omnibus R. R. Co.	500
Pacific Ins. Co.	500
Occidental Hotel	500
James Lick	500
Central R. R. Co	500
Union Ins. Co.	500
Amount forwarded	$16,600
Amount forwarded	$16,600
N. W. Spaulding	250
R. Patrick & Co.	250
C. R. Steiger	250
Locke & Montague	250
Truesdell, Dewey & Co.	250
Gallagher, Weed & Co.	250
Hanscom & Co.	250
Coffey & Risdon	250
C. W. Stevens	250
R. A. Swain & Co.	250
Whittier, Fuller & Co.	250
Meeker, James & Co.	250
Simmons, Rowe & Co.	250
Baker & Hamilton	250
Schultz & Van Bergen	250
Hawley & Co	250
Goddard & Co.	250
Hinckley & Co.	250
James Macken	250
Miller, Haley & Wetmore	250
H. H. Pearson & Co.	250
N. P. Cole & Co	250
P. Sather	100
Hickox & Spear	100
W. E. Loomis	100
Bank of California	3,000
Total received	$25,400
Total amount of Loans returned	21,900
Balance not yet returned	$3,500

RECAPITULATION OF LOANS RECEIVED AND RETURNED.

Total amount of Loans received		$25,400
Total amount of Loans returned	$21,900	
Amount of Loans remaining due as follows :		
N. B. and Mission R. R. Co	1,000	
Omnibus R. R. Co.	500	
Central R. R. Co.	500	
Pacific Insurance Co.	500	
A. Hayward	500	
James Lick	500	
	$25,400—	$25,400

DAILY RECEIPTS AT THE DOOR.

August—8	$5,753 50
10	4,008 00
11	2,683 75
12	2,753 00
13	2,131 25
14	2,150 80
15	3,067 75
17	1,802 50
18	1,502 50
19	1,393 40
20	1,141 00
21	1,051 25
22	1,832 65
24	923 50
25	815 25
26	937 50
27	869 25
Forward	$34,780 85

Brought forward	$34,780 85
August—28	706 25
29	1,341 75
31	814 50
Sept. 1	858 75
2	956 00
3	970 78
4	849 50
5	1,370 25
7	648 75
8	630 95
9	1,242 75
10	758 00
11	640 00
12	1,000 00
Total	$47,569 08

ACCOUNT OF TICKETS SOLD AND BY WHOM.

NAMES.	DOUBLE SEASON.	SINGLE SEASON.	CHILDREN'S SEASON.	ADULT SING'E	CHILDREN SINGLE.	AMOUNT.
Charles Roberts, Clerk	3,194	1,138	290	51,711	7,578	47,569 08
A. S. Hallidie	50	11	....	......	.....	283 00
H. L. Davis	54	16	9	.....	......	331 25
H. J. Holmes	36	8	....	......	.....	204 00
H. D. Dunn	33	1	....	......	......	168 00
D. R. Coleman	66	9	....	......	......	357 00
J. Browning	83	12	....	......	......	451 00
D. Farquharson	25	2	....	......	.....	131 00
John Hancock	16	2	....	......	......	86 00
W. C. Pease	40	10	....	......	......	230 00
Abner Doble	25	2	....	......	......	131 00
J. R. Wilcox	50	....	....	......	.....	250 00
J. B. Pierce	491	106	26	......	......	2,812 00
W. J. Stoddart	24	6	....	......	......	138 00
A. Roman & Co	37	4	....	......	......	197 00
W. B. Cooke & Co	1	2	....	......	......	11 00
Hinckley & Co	14	5	....	......	.....	85 00
Hanscom & Co	34	10	....	......	......	200 00
Bassett & White	5	2	....	......	......	31 00
Isidor Bruns	5	1	....	......	......	28 00
James L. Field	5	4	....	......	......	37 00
J. T. Bowers	47	19	....	......	......	292 00
Blythe & Wetherbee	2	....	....	......	......	10 00
S. F. & S. J. R. R. Co. Commuted at 25cts. each	....	....	...	252	......	63 00
Thomas H. Selby & Co	16	....	....	......	......	80 00
Estate of A. S. Lipman	1	1	....	......	......	8 00
J. M. Eckfeldt, Currency	70	....	....	......	......	350 00
R. L. Van Wyck, "	15	2	....	......	......	81 00
Frank Soule, "	25	....	....	......	.....	125 00
H. M. Miller, "	4	....	....	......	......	20 00
H. Bruns, "	95	8	....	......	......	499 00
Holland Smith, "	21	....	....	......	......	105 00
J. C. Innis, "	8	2	....	......	......	46 00
Total	4,592	1,383	325	51,963	7,578	$55,409 33

RECAPITULATION OF TICKET ACCOUNT.

Double Season Tickets	$4,592	@ $5 00	$22,960 00
Single Season Tickets	1,383	@ 3 00	4,149 00
Children's Season Tickets	325	@ 1 50	487 50
Adult Single Tickets	51,711	@ 50	25,855 50
Adult Single Tickets	252	@ 25	63 00
Children's Single Tickets	7,578	@ 25	1,894 50
Total			$55,409 50

ADDRESS

AT THE OPENING OF THE

Sixth Industrial Exhibition,

BY THE HON. NEWTON BOOTH.

Whatever virtues may rightfully be ascribed to this nineteenth century in which we live, humility is not one of them. It is a philanthropic age. Never before were there so many benevolent organizations; never were the helpless, the blind, the insane, so tenderly cared for. It is a heroic century—its sixty-eight years have been full of that heroism that does not "set life at a pin's fee." It is a democratic age. Never have the people been of so much account, and seldom has genius been so rare. It is pre-eminently an age of mechanical invention. It makes steam bear its burdens, lightning carry its messages, the sun paint its pictures. But it is not a modest age. It does not lack self-confidence or self-praise. It is brim full and running over with egotism. It regards with self-complacent pity the centuries gone before that did not have steamboats, railroads, and telegraphs, sewing machines, cooking stoves, lucifer matches, steel pens, cylinder presses, power looms, cotton gins, gang plows, reapers, thrashers, apple parers, turning lathes, nitro-glycerine, giant powder, columbiads, needle guns, Colt's revolvers, steam paddies, tracklayers, baby jumpers, chloroform, photographs, and coal oil. It looks with a kind of commiseration on the ages to come, when the world will have to keep on using old tools, as human ingenuity and nature will be alike exhausted, and there will be no new forms to invent, no new forces to discover. If it experiences a momentary chagrin because it has not achieved the perpetual motion, nor successfully an avitor, it is consoled with the reflection that it has not accomplished the first because it is impossible, and that it will the second because it is possible. In short, whoever has not managed to be born in the nineteenth century has been very unfortunate, or has made a great mistake.

Standing in this temple of art, this armory of labor, filled with the implements with which toil carries on its warfare with want, and beautiful with the evidence of its triumphs, we may at least claim with becoming modesty that the world is now fast learning how it can most easily get its daily bread—how labor can be made most productive for the supply of physical wants. Two other questions behind that—how the burdens and rewards of labor shall be equitably distributed, and how the time not needed for the supply of physical wants shall be so employed that the age may be clothed with an intellectual and spiritual glory equal to its material wealth and power, it has scarcely begun to solve—questions that may not be rightly solved until a civilization shall arise as superior to ours as ours is to barbarism, in a future as distant from us as we are from the creation of man.

The problem of daily bread, however, is neither easy nor unimportant. If men depended upon nature alone for food, upon game, fish, and wild fruits, the country would be crowded where population averaged one to five square miles. The trapper was right, if he would remain a trapper, in moving further west, because the settlement was getting too thick for elbow-room when his neighbor built his cabin only ten miles away.

Consider what the world consumes every year. Two hundred million pounds of flour and one hundred and thirty million pounds of meat go down the throat of New York City yearly. Multiply by a million, and if you can conceive the result you will have some idea of what it takes to feed the world with bare necessities. California consumes annually three hundred and sixty-five thousand barrels of flour, seven hundred thousand bushels of potatoes, seventy million pounds of meat, a thousand tons of codfish, thirty-eight million pounds of sugar, five million pounds of coffee, one and a half million pounds of tea, five million pounds of butter, twenty million pounds of rice ; wears out fifteen million dollars worth of dry goods and shoe leather, and burns up, beside houses and mountain towns, two hundred and fifty thousand tons of coal, four million pounds of powder, four million pounds of candles, one million gallons of coal oil, and fifty millions of cigars, not to mention the fifteen hundred thousand gallons of whiskey that annually assist to consume us. If all this had to be raised, mined, and manufactured, or paid for by the labor of our hands, unassisted by art, we would have few holidays, had no pageants like this. If the world had to be housed, fed, and clothed with only such crude tools as actual necessity would suggest, the many would be slaves to the few, and worn out in their service, or all would be the slaves of toil. There could be no accumulations, nothing laid up against a bad season or a rainy day, and the wolf would be continually at the door. Then, whoever would succeed in pointing a stick with iron to scratch the ground at seedtime, and whoever would teach a dog to guard the sheep while the shepherd slept, would be benefactors of the race. The man who would discover that salt would preserve meat would deserve a patent of nobility ; he who would tame a horse and make him draw a sled and carry his master would be a king ; and he who would make the wind and the water turn a wheel to grind the corn might be worshiped as a god. Then imagine that after a day's toil that brought no hope, and a night's sleep that brought no dreams of rest, men should suddenly awake as into a world of enchantment, and find themselves supernaturally endowed, so that they could accomplish with their hands or by a wish all that we do with all the tools, machinery, and appliances of modern life, as though each had a hundred arms and were gifted with magic—as though each were winged with swiftness like the wind, had sinews of steel, and strength like the power of steam ; and you will appreciate the miracle of art—realize what a load of toil INVENTION has lifted from the shoulders, what a burden of care it has taken from the heart of humanity. Then, too, you will learn where the leisure comes from after actual wants are supplied, part of which goes into luxuries, ornaments, books, newspapers, paintings, music, homes, schools, churches, cities, culture ; part into idleness, *ennui*, whiskey, tobacco, fast life, folly, vice, crime, and all of which is called—civilization.

But this miracle of art is not the work of a night or the glory of an age ; it is the work and glory of the whole of man's life on earth. In fable Minerva sprang, armed and panoplied, from the brain of Jove ; but in fact art is the slow growth of time. Take, as as illustration, the art of printing. The idea of printing is older than history or tradition. It is so natural and easy, it would have been strange if the idea of the printed book had not been suggested to Adam, if he had known his letters, by his own footprints on the sand. Seals were in use before the book of Job (possibly the oldest book in the world) was written, and seals, used for making impressions, contain the whole principle of printing. Bricks and tiles, covered with characters impressed upon the clay before it was burned, were common not only in Rome and Athens but in Babylon and Ninevah. Wood engraving was brought into Europe from the East long before books were printed. The printing of playing cards probably first suggested the printing of books, which was at first simply wood engraving, each page being printed upon a block with raised letters; then the letters were separated into wooden movable types; then metallic types were cast. Meantime the Arabs—by what processes of thought, by what slow stages of invention, I know not —had progressed from using the bark of plants, the papyrus of the Egyptian, to the manufacture of paper. The method of casting types so that they could be easily multiplied, and the manufacture of paper, were the real difficulties in the invention of printing; when these were overcome Hoe's cylinder press became easy, though it took the improvements of four hundred years to attain it. Nay, THE PRESS, snowing newspapers daily all over the land, and sending streams of knowledge through all lands, so that whoever is athirst may come and drink, was as inevitable as the succession of the ages when Job had written: "it is turned as clay to the seal."

Two centuries before the Christian era, Hero, of Alexandria, described a steam toy—a mere plaything. After two thousand years of experiments, suggestions, and improvements, that plaything became the steam engine. In the same manner the round-bottomed canoe, made from a log, hollowed out with fire, grew into a ship. Fulton combined these two growths and made the steamboat. For more than a hundred years before Watt was born, the tramroad had been in use in England for conveying coal from the colliery to the place of shipment. Parallel rails, at first of wood, then of iron, were laid, to which wagons with grooved wheels were fitted, and drawn by horses. Stephenson took the engine of Watt, added the steam blast, mounted it on driving wheels, and made the locomotive; put it on the tramroad, and gave the world the railway.

Hargrave's spinning jenny, Arkwright's spinning frame, and Cartright's power loom, which were but the development of the distaff, the spinning wheel, and of the hand loom in which Joseph's many-colored coat was woven, were contemporary with the invention of the condensing steam engine by Watt—about 1780—and the method of puddling and rolling iron immediately followed. The steam engine revolutionized industry as gunpowder had war. Furnishing a power stupendous in its strength, marvelous in "the ease, precision, and ductility with which it can be varied and applied, so that it can engrave a seal or crush masses of obdurate metal; draw out without breaking, a thread fine as a gossamer, and lift a ship of war like a bauble in the air; embroider muslin and forge anchors; cut steel into ribbons and impel loaded vessels against the fury of the winds and waves;" it not only supplemented all mechanical arts, but it so stimulated the inventive faculties that since then men have expressed their best thoughts in wood and iron. Surrounded here be these thoughts embodied in the visible forms of industry and art, we are in the presence of a poem, the epic of human progress, in which the voices of all the ages blend, grander in its suggestions, more inspiring in its hopes, and sublimer in its theme than Homer, or Dante, or Milton sang.

But let us not suppose that the germs of art have reached their full fruition in our age, nor that the future will plagiarise the present or repeat the past. A galvanic toy, the plaything of to-day, may one day supersede the steam engine. Steam, that is usually cited as the highest instance of the dominion of the mind over matter, is expensive in the machinery and fuel it requires, dangerous and destructive in its explosive properties. Nature's grand forces are silent and safe. The rays of the sun exercise on earthly objects every day a *mechanical* power "in comparison with which the erection of the Egyptian pyramids dwindles into the labor of mites." The force that binds the earth together, particle to particle, is mightier than the earthquake that comes in visitation of terror. Who can touch the chain by which the sun holds the planets in their orbits? Hear what Professor Tyndale, the highest scientific authority, says, after a mathematical calculation of one of the molecular forces that are lavished around us: "I have seen the wild stone avalanches of the

Alps, which smoke and thunder down the declivities with a vehemence almost sufficient to stun the observer. I have also seen snow flakes descending so softly as not to hurt the fragile spangles of which they are composed; yet, to produce from aqueous vapor a quantity of that tender material which a child could carry, demands an exertion of energy competent to gather up the shattered blocks of the largest stone avalanche I have ever seen, and pitch them to twice the hight from which they fell." Shall not these forces, in which nature is so prodigal, be utilized in the art and service of man?

There are dominions of thought in which the mind has reached the limits of its capacity, but not in the sphere of mechanical invention. If we could be permitted to enter an art exhibition at Athens in the days of Pericles, while wandering through the department of machinery, agricultural implements, mechanical tools and power, we might exclaim against the poverty of the Greek mind and the barrenness of Grecian life. But when the statues of Phidias were unveiled—when those marbles "whose headless, armless trunks, in their severe and awful beauty, are at once the delight, admiration, and despair of modern artists"—stood revealed in the full glory of their original perfection, we would admit that there, at least, the world has made no progress, for none was possible.

Or, if a disciple of the divine Plato could revisit the earth, he might hear at the High School in San Francisco, boys and girls reciting, like a household tale, truths in science his master would have died to know; but when he would mingle with the sages of the earth, he would find that in philosophy, the thoughts of his great teacher were the boundaries of human speculation; that the highest office of philosophy now was but to interpret thoughts uttered twenty-five hundred years ago. He could wander around the world and hear no language spoken superior to the Greek in power, compass, and flexibility; and he would discover that in poetry, eloquence, and history, the Grecian mind had furnished the models for all succeeding ages. In eloquence, poetry and metaphysical philosophy, in sculpture, painting, and possibly in the forms of architecture, in language as a medium for the expression of thought, and possibly in music, the language of the emotions, there will be no higher attainment than has already been reached. No race will ever arise superior to the Greek in intellectual and physical organization; and no men born of women will ever thrust Homer and Shakspeare, Phidias and Raphael, Demosthenes and Mozart, from their thrones of pre-eminence.

There are also two devices or inventions which are, humanely speaking, perfect. One is that of Arabic numerals, and the method of decimation, by which the ten simple figures the school-boy scrawls upon his slate can be made to express everything the mind can conceive in numbers, reaching upward toward the infinite and downward toward the infinitessimal. The other is the invention of the alphabet, by which twenty-six characters have become the factors of all human intelligence, bearing from generation to generation the thoughts, and wisdom, and learning of men; have become the world's memory, permitting nothing to perish that is worthy to survive; an invention so difficult to conceive, so simple in use, so grand and complete, that the world had better lose all other arts combined than to forget its A, B, C's. Sometimes I have thought of them as of twenty-six soldiers that set out to conquer the world. That A was an archer, and B was a bugler, and C was a corporal, and D was a drummer, and E was an ensign, and F was a fifer, and G was a gunner, down to Z, who was a zouave; and these twenty-six drill sergeants have subdued the kingdoms of the earth and of the air; taken possession of the realms of thought and founded a republic of which the wise and noble of all time are citizens and contemporaries; where there is neither death nor forgetfulness—the imperial republic of letters. Again I have thought of them as of a telegraphic cable laid beneath the waters of time, safe from disturbing storm and tempest—so short the child's primer will contain it—so long it connects the remotest ages with the present, and will stretch to the last " syllable of recorded time." We pride ourselves on the successful laying of the Atlantic Cable as the crowning achievement of human invention ; but here is a cable that speaks not in broken, doubtful, and sybiline utterance, but charged with the whole spiritual power of all human intelligence, with a circuit reaching through all time, connecting all brains and all hearts in its network, and certain to carry every message worthy to go there to the last man who shall live upon earth.

Here is an invention so simple that the child learns its use while playing with his blocks ; so grand that all generations cannot exhaust its capabilities ; so perfect no age will be able to add to or take from. In the invention of letters man arose nearest to creative power. In other inventions he has dealt with material substance, with tangible things ; in letters he created from nothing forms into which he himself could breathe the spirit of life, the immortal soul of power, and eloquence, and beauty.

In letters the mind has reached the highest heaven of invention ; in literature and the fine arts it has touched the boundaries of its power, and knows where the horizon meets the earth ; but in science and the mechanical arts there will be no limit to improvement while nature has one secret unrevealed, one force unappropriated. In those grand domains there " is ample scope and verge enough " for the thought, investigation, and skill of all generations to come, and the work of each generation will be but the scaffolding on which the next shall stand, building ever toward a sky that recedes as it is approached.

With grateful reverence to the past, whose inheritance we enjoy, proud of the achievements of the present, looking hopefully to the future, to whose glories our exertions will contribute, in the name of free and intelligent labor we dedicate this Hall to Industrial Art, conscious that year by year succeeding structures will here arise dedicated to the same purpose, in ever-increasing magnificence of display and completeness of design and execution, evidencing the progress of our State, our Country, and the whole race of man.

Reports of the Examining Committees.

CLASS I.

ON STEAM ENGINES AND MOTIVE POWERS.

Under the Spanish and Mexican rule California was a sparsely settled country, whose inhabitants lacked the energy and enterprise necessary to manufacture for themselves, or to supply the then comparatively small wants of adjacent countries. Contenting themselves by increasing their herds of horses and cattle, the hides and tallow of which were their only articles of export, the people of California relied upon the few trading vessels that annually visited the coast for all their manufactures and kindred supplies. The first signs of enterprise that woke the lethargy of the people, was the erection of a few small sawmills, which were located in such portions of the country where fall of water was to be obtained sufficient to drive their primitive machinery, and from the erection of one of which came the discovery of gold that has resulted in the building up such a powerful State on the shores of the Pacific.

With the rush of emigration in 1849 came new and extended wants from a people fresh from the refinements and comforts of civilization. These at first were supplied by importations, often at excessive prices, thereby draining the State of means much needed to develope the natural wealth of the country. Aside from the high cost of the supplies thus obtained, a large portion of the articles imported were unfitted in quality or kind for the habits or peculiar wants of our people. From these causes early arose a demand for local manufactures, and the consequent necessity for use of motive power and machinery. Owing to the peculiar conformation of the country, and the lack of safe and commodious harbors along the coast near which water power could be obtained with cheap transportation to market, steam became the favorite power throughout the State.

Foundries were established in San Francisco early in 1850 to manufacture mining and other machinery, and from turning out the simplest and rudest work have improved in their facilities until at present they make all articles of their manufacture equal in design, workmanship and utility to any produced elsewhere. The high price of skilled labor, materials and excessive cost of fuel in most portions of the State, has tasked the ingenuity and invention of our mechanics to improve steam and other motive powers so as to reduce expenses of manufacturing to its minimum amount. It is with an honest pride we claim that success most brilliant has rewarded the efforts made in this particular, and point to the display of engines and motive powers in the Exhibition of 1868 as proofs. Considering that less than twenty years has elapsed since the first casting was run in the rudest manner, we have made greater progress relatively than any other State in the Union, our foundries and machine shops being of a capacity for the production of the largest machinery that the wants of our domestic or foreign commerce may require.

The records of the Patent Office at Washington attest that the inventive genius of the people of California, in proportion to population, lead all the other States in the Union in the number of patents issued during the past year. Great, however, as has been the progress of California in manufacturing motive powers and machinery, the future promises an increase of productiveness to her foundries and machine shops hardly to be grasped by the mind of man. The speedy completion of the Pacific Railroad will soon bring her into intimate intercourse with the people of the center of the continent, and by quick and assured transportation will increase their wants and productiveness and consequent machinery demand. What has heretofore been sparsely settled and left as a comparative desert, will soon be populated with busy, enterprising people, who will develope the great natural resources of the country by the most approved machinery and motive power. By the use of the railroad the time of transportation will dwindle from months into weeks, and from weeks into days, thus stimulating the industry of the people of Nevada, Utah, Idaho, Montana and Colorado many fold. With this prospect before them, the energy, invention and perseverance of the mechanics of California will be pushed to their utmost and result in a degree of prosperity to her people which as yet has not been seen.

CLASS 1--SECTION 1.

STEAM ENGINES.

COMPRISING STATIONARY, MARINE AND FIRE ENGINES AND LOCOMOTIVES ; ALSO, BOILERS AND IMPROVEMENTS THEREON.

To the Board of Managers Mechanics' Institute Industrial Exhibition :

GENTLEMEN :—As Judges of Class 1 (Section 1) Steam Engines—comprising stationary, marine and fire engines and locomotives ; also boilers and improvements thereon, we respectfully submit the following report and recommendations as to awards to the articles submitted to us.

SMALL BALANCED OSCILLATING STEAM ENGINE, designed and built by Detrick and Eckert, San Francisco. There is much merit in the design of this engine. It is very compact, considering the power it is capable of exerting, and a principal feature is the relieving the cylinder trunnions from pressure, which has hitherto been no small objection to the employment of the oscillating engine which otherwise possesses the advantage of occupying less space than other engines of equal power. This engine worked smoothly, is finely proportioned and elegantly finished, and both in the design and workmanship does the exhibitors the greatest credit.—Awarded a Silver Medal.

WORKING MODEL OF A HORIZONTAL STEAM ENGINE, made and exhibited by S. C. Higgins, an apprentice at the Union Iron Works. This engine is well proportioned, and the parts are finely finished and fitted together, giving evidence of much skill and talent which should not lack encouragement.—Awarded a Diploma.

WORKING MODEL OF A HORIZONTAL STEAM ENGINE, by Robert Blair, an apprentice at the Vulcan Iron Works. made during the first year of apprenticeship. This engine is more of *a toy* than that made by S. C. Higgins, but is a fair effort for so young a mechanic. Mr. Blair should try again as he gains experience, and he will no doubt succeed more satisfactorily next time.—Awarded a Certificate of Merit.

OSCILLATING DOUBLE STEAM ENGINE, by H. B. Martin. The parts of this engine are rather ingeniously arr·nged, making quite a compact and simple machine. It will not, however, be very economical in its use of steam, but its great simplicity will recommend it in many cases where small steam power is required and where skill cannot be readily obtained.—Awarded a Diploma.

COMBINATION ENGINE, by C. H. Foster. This is a small double piston direct-acting engine, and is an effort to put the steam engine into the most compact form possible. We consider the arrangement employed for communicating the piston motion to the crank pin very objectionable, and almost inadmissible in cases where the whole power of the engine is transmitted through such means.

SMALL CONDENSING BEAM ENGINE AND BOILER, by J. M. Greiss, is neither well-proportioned nor well-made, but may serve to amuse the uninitiated.

WORKING MODEL OF LOCOMOTIVE ENGINE, by Henry Tripp.—This model is finely proportioned and is complete in all the multitudinous details of such engines, and is a credit to the builder.—Awarded a Diploma.

BOILER MADE OF STEEL, by the Risdon Boiler and Locomotive Works.—An excellent piece of work in every respect.

C. C. BEMIS' FURNACE GRATE BARS, exhibited by the Ætna Iron Works. A superior bar for burning the fine bituminous coals of this coast. Those on exhibition are fine specimens of castings of this kind of iron work.—Awarded a Silver Medal.

CARVALHO'S STEAM SUPERHEATER, exhibited by Robert L. Harris, and attached to the boilers employed to furnish steam for the running steam machinery in the Exhibition, is a very useful invention, and fully proved its value during the term it has been in use at the Pavilion. Its action is the drying of the steam in its passage through it from the boiler to the engine and also so far adding to the steam a superior degree of heat that it will arrive at and be worked in the engine without condensation. This is found to result in a considerable saving in fuel, as well as a more effective action of the engine.—Awarded a Silver Medal.

MODEL OF BOILER AND ATTACHED APPARATUS, by John L. Constable, "to exhibit a new mode of generating steam by causing a flow of steam superheated and the water from the boiler by their own pressure to meet in a separate vessel, there to generate steam by contact of any temperature desired." We are of the opinion that the inventor is in error in anticipating any economic or useful result from such an arrangement. The invention has not as yet been tried, and a proper test may point out the way to valuable invention and ultimate success. The field is a vast one, and much yet remains to be accomplished in this direction.—Awarded a Certificate of Merit.

DUNBAR'S PISTON PACKING, exhibited by H. S. Smith.—A very reliable metallic packing for the pistons of steam engines, extensively used and looked on with much favor.—Awarded a Diploma.

HARRISON'S PATENT BOILER, exhibited by Tay, Brooks & Backus.—This is a boiler made entirely of cast iron, economical in construction, not liable to serious explosion, and in our opinion must be an excellent boiler for stationary purposes, as we believe it has already proved in practice.

HICK'S PATENT STEAM ENGINE, exhibited by Howland, Angell and King (Miners' Foundry). This engine has four cylinders (single-acting) of 10 inches diameter, and each piston 10 inches stroke, the engine being rated at 50 horse-power. It was used in driving the machinery in the Exhibition alternately with the other large engines by the Union and Pacific Works. This Hick's engine is very compact and light, weighing but 5,500 pounds, and was tested to 50 horse-power by a brake applied to the driving pulley and worked steadily under this load. This engine was examined with great care, both as to its economy in the development of power and the practical character of the details of the machinery. Its showing as regards an economical use of steam was not so favorable as was anticipated from reports, and we consider some of the details of the machinery employed objectionable. The engine exhibited is of the reversible kind, and the employment of expansion is quite limited, but we are informed and fully believe that the unreversible engine of this pattern will work with a degree of economy quite superior to the one under consideration. —Awarded a Diploma.

HORIZONTAL STEAM ENGINE, by the Pacific Iron Works.—This engine is 14 inches diameter of cylinder and 3 feet stroke of piston; it is finely proportioned and finished in every part, and is provided with Wright's Patent Variable Expansion Valves. It worked very smoothly throughout and was used every third day to drive the machinery of the Exhibition, which it did with very great regularity of speed. The castings, finishing and general appearance of this engine are a credit to the Works where it was built. It was tested up to 50 horse-power by a brake, which was as high a power as the belt used could be made to transmit, and worked steadily under every grade of power applied and with very great economy in the expenditure of steam through the instrumentality of the variable expansion valves above mentioned.—Awarded a Gold Medal.

HORIZONTAL STEAM ENGINE, by the Union Works.—This engine is 16 inches diameter of cylinder and 3 feet stroke of piston, and is provided with Scott & Eckert's Patent Variable Expansion Valves. It is very substantially built and well proportioned, and is capable of doing severe duty. This engine was used every third day to drive the machinery of the Exhibition, working very smoothly and steadily under all the circumstances and with great economy. The friction brake was also applied to this engine, but owing to the fact that the belt, which had been provided for driving merely the machinery of the Exhibition, was not of a suitable size to transmit the full power of the engine, the test was not applied above 30 horse-power, and up to this point the power was developed with the greatest possible economy in the expenditure of steam. In speaking of the performance of this engine the variable expansion valves, by Messrs. Scott and Eckert, deserves especial mention of the ingenuity displayed in the arrangement of the valves and in attachment of the same to the governor, whereby the position of the slides is changed so quickly to accommodate any change of load upon the engine, that the correct speed of the engine is maintained with wonderful uniformity under all circumstances. This engine will work 50 or 60 horse-power with care and economy.—Awarded a Silver Medal.

WM. BURNETT,
MONTGOMERY FLETCHER, } Committee.
JOHN SWYNEY,

CLASS 1—SECTION 2.

MOTIVE POWER.

COMPRISING AIR ENGINES, ELECTRIC ENGINES, AND ALL MOTIVE POWERS, SUCH AS TURBINES, WATER-WHEELS, WINDMILLS, ETC.

To the Board of Managers Sixth Industrial Exhibition, Mechanics' Institute, San Francisco:—We, the undersigned, a committee appointed Judges of Award upon "Motive Power," have examined under that head W. J. Tustin's and Atwood & Bodwell's Windmills, and E. O. Hunt's Windmill model.

W. J. Tustin's is a windmill of a new construction, and is made with a view of being adjustable, as to power and rate of speed, and avoids the necessity of climbing upon the frame for the purpose of adjustment, or, as Mr. Tustin has it arranged, of going near the mill, as by his manner of adjustment, the mill can be controlled from any distance, even from a person's bedroom. This advantage we consider particularly good. Other points in construction, though differing from other mills, have a great resemblance. The main shaft is strong and has a double crank, and has a bearing on both sides of pump rod bearing. The mill-wheel is made on a very large casting, and possesses great strength, large surface and is still very light. The whole mill shows great attention to details, and, in our opinion, deserves very great credit, and has some advantages over the others exhibited.—Awarded a Special Diploma.

Atwood & Bodwell's windmill is of the same class as the foregoing, and, like it, is adjustable, as to power and speed. It is also operated from below, but has not been arranged to be operated upon from a distance. The main shaft is short and straight, and works in long bearing, which, though well made, is not, in our opinion, so servicable. The wheel is secured by a cast-iron flange, and further by a cast-iron ring, somewhat large in diameter, which makes the whole very strong and stiff. The workmanship and material is well put together, and, in our opinion, will do good service.—Awarded a Diploma.

E. O. Hunt's model of a windmill is made different from the above mills, by having no sail or vane to keep the mill in the wind, but has its wheel set behind the centre of the tower, far enough past the centre to swing the face to the wind. Its centre shaft is set in two bearings, but each bearing is in the back of the centre of tower, and with a crank flange to put pump in motion. This mill is provided with a brake and band to hold the mill stationary for stoppage or regulation. We are unable to judge of the mechanical work done on the large mills of which this purports to be a model. Awarded a Certificate of Merit.

We respectfully submit the above to your consideration.

Joseph Moore,
Geo. K. Gluyas, } Committee.
Wm. McKibbin,

CLASS II.

MANUFACTURING MACHINERY.

The influx of an energetic and large population soon after the discovery of gold in this State naturally created many local necessities and wants for peculiar manufactures that could not well be supplied from abroad. Machinery for manufacturing was soon introduced, the commoner products at first made being improved on steadily. At the present time the range of manufacturing machinery is most creditable to the enterprise of our people, three-fourths the products consumed being furnished by our local workshops and manufactories. Many of the most important manufactures of metals are produced as well as virtually all those of wood required. In agricultural machinery less progress has been made, owing mainly to the absence of native woods suitable for the purpose. So far as known in the entire United States, the Pacific coast seems to be destitute of woods suitable for agricultural machinery or manufacturing. The late acquisition, Alaska, is, however, reported to produce birch, ash and oak of good quality in a few isolated localities, and the U. S. Coast Survey Expedition under charge of Professor Davidson, will make especial search for them during the ensuing summer. Should any extensive supplies of these woods of suitable quality be found, the manufacturing of agricultural machinery would become of great importance, the requirements for reapers, mowers, headers, threshers, and similar machines being already very large and rapidly increasing.

CLASS 2—SECTION 1.

MACHINERY USED IN WORKING METALS.

To the Managers of the Mechanics' Institute Fair.

Gentlemen :—Your Committee, "Judges of Award," have the pleasure of informing you that they have performed the duty assigned them, and would recommend the following, namely :

F. Formhal's Hydraulic Blowers.—Useful for many purposes, but not likely to become popular in this country.—Awarded a Certificate of Merit.

Goff & Bishop's Crank-pin and Cross-head Lathe.—Considered to be the most valuable invention in Class 2, its introduction and use saving a large amount of labor and detention of valuable machinery, and that it be entitled to a gold medal.—Awarded a Silver Medal.

Marsh, Pillsbury & Co., Fan Blower.—Worthy of the attention of those using fan blowers.—Awarded a Certificate of Merit.

Apparatus for Making Screwed Boots and Shoes, by N. Lumsden, entitled to a Diploma.—Awarded a Diploma.

Self-Lubricating Journal, by Atwood & Bodwell.—An ingenious device, and worthy the attention of mill men.—Awarded a Certificate of Merit.

Patent Spring Hammer, by Peterson & Jones.—A very useful invention, and worthy of a Diploma.—Awarded a Diploma.

Patent Turning Lathe, by William Rudolph.—A convenient and useful tool, worthy the examination of those requiring lathes for light work.—Awarded a Certificate of Merit.

Self-Regulating Thread-Cutting Machine, by J. Dougherty.—A convenient and useful machine for many kinds of work.

Rose's Patent Upsetter, by C. F. Robinson.—An excellent tool, and one commanding the attention of those desiring an upsetter, punch and shears combined.—Awarded a Certificate of Merit.

Eccentric Chuck, by J. S. Detrick.—A valuable tool for its adaptability in the execution of the many kinds of work for which it may be used, and entitled to a Silver Medal.—Awarded a Silver Medal.

Punch and Shears, by Kittridge & Leavitt.—Excellent tools, and worthy of honorable mention.—Awarded a Certificate of Merit.

Tire Upsetter, by Hughes, Kimball & Co., for simplicity, durability and efficiency is worthy of a Diploma.—Awarded a Diploma.

Rogers' Portable Forge, by E. E. Winchell, convenient for special purposes.

Hallidie's Patent Wire Rope Machine. by A. S. Hallidie & Co.—A machine valuable for simplicity, efficiency and durability, and entitled to a Diploma.—Awarded a Diploma.

Nelson and Doble's Drilling Machine.—A convenient and useful machine, and especially recommended to the favorable consideration of your Committee.—Awarded a Diploma.

All of which we have the honor of submitting, etc.:

B. P. Brunner,
D. B. Hinckley, } Committee.
E. T. Steen,

CLASS 2—SECTION 2.

Machinery for Working Wood, as Saw Mills, Planing Machines, Mortising Machines, Scroll Saws, Lathes, etc.

To the Managers of the Mechanics' Institute Fair.

Gentlemen :—We, the undersigned, Judges of Awards on Class 2, Section 2, appointed by the Executive Committee of the Industrial Exhibition, held by the Mechanics' Institute in 1868, report as follows :

J. H. Small, for a planing machine, California manufacture, with slotted head and extension gear as applied to the same, recommend an award of a Gold Medal for same.—Awarded a Silver Medal.

F. A. Huntington, for a shingle machine, California invention and manufacture, we recommend an award of a Silver Medal.—Awarded a Diploma.

James Hatch, for guards and guides for variety or shapening machines, whereby the danger of operating such machines is considerably lessened, we recommend an award of a Silver Medal.—Awarded a Certificate of Merit.

James Hatch, for his invention in mortising chisels, we recommend that a Diploma be awarded.—Awarded a Special Diploma.

J. W. Alesworth exhibited a machine for jointing staves, but it was not in operation, and no explanation of it was given. We were, therefore, unable to form a judgment as to its merits or to make any awards concerning it.—Awarded a Certificate of Merit

D. A. Macdonald, Chairman.
C. W. Thomas.
W. N. Miller.

CLASS 2—SECTION 3.

AGRICULTURAL MACHINERY AND IMPLEMENTS.

To the Managers of the Mechanics' Institute Fair.

GENTLEMEN :—The Committee having attended to the duties assigned to them, and having examined all the articles in Class 2, Section 3, report that the number of agricultural implements exhibited was not large, but a good proportion of them were of home manufacture.

COFFIN & STANDISH, Martinez, exhibited a steam plough invented and constructed by them in California, which for its excellence we recommend be awarded a Gold Medal.—Awarded a Gold Medal.

J. MARQUIS, San Francisco, exhibited a model of a steam plough, of which we make honorable mention.—Awarded a Certificate of Merit.

BAKER & HAMILTON exhibited a sweepstakes gang plough of special excellence, a California invention, which we recommend be awarded a Silver Medal.—Awarded a Silver Medal.

J. & J. INGHAM, for a good gang plough, we recommend a Diploma.—Awarded a Diploma.

EDWARD KIMBALL exhibited a gang plough, of which we make honorable mention.—Awarded a Certificate of Merit.

J. PRICE, for best hay press, we recommend a Diploma.—Awarded a Diploma.

H. G. PRATT, for a hay press, we make honorable mention.—Awarded a Certificate of Merit.

BAKER & HAMILTON, for best mower (Excelsior) we recommend a Diploma.—Awarded a Diploma.

M. C. HAWLEY & Co., for best one-horse mower (Clipper), we recommend a Diploma.—Awarded a Diploma.

D. WINTER & Co., for best combined seed sower and cultivator, we recommend a Diploma.—Awarded a Diploma.

DEXTER & LAMBERT, for best cultivator, a California invention, we recommend a Diploma.—Awarded a Diploma.

W. B. REARDY, for improved cultivator tooth, we recommend a Diploma.—Awarded a Diploma.

A. HUNTER, for best grain separator, a California invention, we recommend a Diploma. Awarded a Diploma.

A. HUNTER, for model of combined rake and loading machine, we make honorable mention.—Awarded a Certificate of Merit.

RUSSELL & ERWIN MANUFACTURING Co., for best self-raking reaper, we recommend a Diploma.—Awarded a Diploma.

W. H. WEISTER, for Randall's patent sulky rake, we recommend a Diploma.—Awarded a Diploma.

F. B. LAMB, for vegetable root cutter, we recommend a Diploma.—Awarded a Diploma.

A. C. FARGO, for an improved wagon brake, we recommend a Diploma.—Awarded a Diploma.

J. J. HATTABOUGH, for Eagle hay fork, we make honorable mention.—Awarded a Certificate of Merit.

WALTER N. HAWLEY & Co., for best hay cutter and best single ploughs, we recommend a Diploma.—Awarded a Diploma.

HORATIO STEBBINS,
W. C. BARTLETT,
C. L. LOW,
SAML. DINSMORE,
R. B. WOODWARD.

CLASS III.

MINING MACHINERY.

The importance of machinery in successful mining operations in California and adjacent States and Territories. can hardly be over-estimated. Commencing with the earliest species of work engaged in, placer diggings, it was soon found that the use of machinery was required in all but the easiest and simplest mining. The "cayote" or hill diggings that followed became more profitable through the use of windlasses and pumps, the latter being often run by the water power in adjacent ditches. The discovery of quartz ledges in 1850, called for more expensive and powerful machinery, both steam and water being used as the motive power. With the advent of quartz mills, the peculiarly varied qualities of ore demanded in many instances new styles of machinery to admit of being worked with pecuniary success, and the requirement had to be met by the ingenuity and invention of our (as it were) inexperienced miners. The usual methods of reducing ores in some cases were either too costly or slow to admit of profit, while many of the kinds of ore found were combniations with base minerals unknown to mining science elsewhere. From these circumstances arose a school of practical mining science, which after many and costly experiments has achieved a success in reducing the majority of the precious ores found. At the present time while there is still great room for improvement in yield and decrease of expense in reducing many kinds of gold and silver ores, yet the inventive genius of our people has placed California and Nevada in the front rank in perfectedness of mining machinery. Hardly any form of mineral is now found for which there has not been machinery invented to meet the necessities required for its profitable reduction. Ores that a few years since were unprofitable to work, although rich in mineral from combinations with base metals, are now reduced with comparative ease and cheapness. By these improved methods and machinery the annual yield of precious metals is kept up, and with the advent of increased capital for investment and lower rates of interest the business of mining in both California and Nevada promises to become of greatly larger extent than ever before.

CLASS 3—SECTION 1.

Machinery used for Mining, Tunnelling and Metallurgical Processes, Crushers, Stamps, Grinders, and other Pulverizing Machines, Amalgamators, Concentrators, Furnaces for Roasting Ores, Hoists, etc.

SAN FRANCISCO, Sept. 10, 1868.

To the Board of Managers of the Mechanics' Fair.

GENTLEMEN :—The undersigned, your Committee on Mining Machinery, have thoroughly examined all the articles included in the list furnished us, and report as follows. Of the articles on competition we have given awards to—

J. HENDY, for the best concentrator on exhibition.—Awarded a Diploma.

THOMAS VARNEY, for the best amalgamator with improvements.—Entered too late for premium

J. B. JOHNSON, for the best improved friction hoist.—Awarded a Diploma.

VARNEY & RIX, for the best rock crusher.—Entered too late for premium.

In awarding the preference to J. B. Johnson's friction hoist, your Committee cannot refrain from expressing a very favorable opinion regarding his competitor, Mr. Moore's hoist, the only difference in favor of Mr. Johnson's invention being in the smoothness and simplicity of the clutch used.

Among the articles on exhibition but without competition we find the following as possessing great merit, viz.: McCauley's rope hose covering.—Awarded a Diploma.

Your Committee is of the opinion that the Varney & Rix rock crusher has the greatest merit of any of the articles in the class exhibited.

Very Respectfully,

C. W. LIGHTNER,
ROBERT WATT,
MELVILLE ATTWOOD.

CLASS 3—SECTION 2.

Pumps, Hose Pipes, Nozzles, Couplings, Apparatus for Burning Petroleum as Steam Fuel, etc.

SAN FRANCISCO, Sept. 11, 1868.

To the Managers of the Mechanics' Fair.

GENTLEMEN :—The undersigned, Committee on Pumps, Hose Pipes, etc., respectfully submit the following report on articles in Class 3, Section 2.

We recommend that the first premium be awarded to D. Hayes, for the best steam pump. Entered too late for premium.

We would make especial mention of the steam cylinder of the pump exhibited by W. D. Hooker as being very superior for the purposes for which it is used, and recommend a Diploma for same.—Entered too late for premium.

To the Vulcan Iron Works Company, for centrifugal pump, we recommend a Diploma.—No award made.

To the Pacific Pump Manufacturing Company for the American submerged pump.—Awarded a Certificate of Merit.

G. M. Gerrish, for California submerged pump.—Awarded a Diploma.

M. D. Laswell, we would recommend a Silver Medal for superior force and suction pumps.—Awarded a Silver Medal.

V. Cushing, for the Excelsior force and suction pumps.—Awarded a Diploma.

The pumps exhibited by Messrs. H. B. Martin & Co., J. Munson, E. O. Hunt and A. J. Smith, are all worthy of honorable mention.—Awarded Certificates of Merit.

L. D. Craig, for superior Globe hydraulic nozzle and coupling, we recommend a Diploma.—Awarded a Diploma.

To the Ætna Iron Works, for the Dunbar steam packing, we recommend a Diploma.—Awarded a Diploma.

O. J. Backus, for a superior hose nozzle, we recommend a Diploma.—Awarded a Diploma.

D. Stoddart has on exhibition a number of Giffard's injectors, Pickering governors, and a Cameron steam pump, all of Eastern manufacture, which are deserving honorable mention.—Awarded a Certificate of Merit.

All of which is respectfully submitted.

Daniel E. Hayes, } Committee.
G. W. Fogg, }

CLASS IV.

NAVAL ARCHITECTURE.

COMPRISING SHIPS OF WAR AND COMMERCE (MODELS), BOATS, BARGES AND VESSELS FOR AMUSEMENT, TACKLES, RIGGING, AND GENERAL IMPROVEMENTS, INCLUDING ALL KINDS OF METALLIC AND HEMP CORDAGE.

The importance of this branch of mechanical industry is already very large on the Pacific coast, and from the growing wants of commerce ,promises to soon increase greatly in excess of any previous period. The enhanced cost of building wooden vessels in Atlantic ports of the United States has turned the attention of builders to the capabilities of the Pacific coast, which have been found to be unusually favorable for the purpose. Vessels can be built at most of the ports of California cheaper than they can be in Atlantic cities, and the immense resources of Puget Sound and Washington Territory in easily accessible timber, suitable for ship building, indicates that it must soon become the most important place in the United States in that business. An advantage that our home-built vessels will have over others is the abundance of freight that the agricultural products of California furnishes for transportation to the Atlantic States, Europe and other foreign ports. The exportation of wheat alone in 1867 required the services of over 250 vessels averaging 1,000 tuns each, during that year, and the crop of 1868 promises to require fully twenty-five per cent additional facilities for the same purpose. California is, however, still in the infancy of her export trade, which in ten years hence with competent farming population promises to make her the first port in importance in grain and several other products in the United States.

To the Managers of the Mechanics' Institute Fair.

Gentlemen:—The undersigned Committee appointed to examine into the merits of articles exhibited in Class 4, Naval Architecture, respectfully report as follows:

The Surf Boat very recently placed on exhibition, and not enumerated in the list handed us, is, in our judgment, a very good model and entitled to high commendation. It strikes us that if the opinion of a greater number than the three comprising this committee should be obtained, the result would be beneficial to all who use boats in heavy weather or in dangerous places.—Awarded a Certificate of Merit.

Tubbs & Co.—California-made rope. Handsome and good. Equal to any manufactured in other countries.—Awarded a Diploma.

A. E. Larssen.—Models of vessels. No doubt very good.

T. F. Mitchell.—California-made blocks. Good. Equal to the best made.—Awarded a Silver Medal.

H. A. Jacobson.—Model of vessel. A very judicious model of a bay craft of remarkably buoyant qualities.

Geo. Howes & Co.—Model of clipper ship, *Young America*. Equal if not superior to anything of the kind ever seen by the committee.—Awarded a Silver Medal.

W. F. Herrick.—Model of a propeller. Very good. Will carry well and travel fast if supplied with proper machinery.

J. Schunhoff.—Model steamboat (tin). Very ingenious.

A. Wingard.—Model patent steamboat wheel. Not found. Was said to have been removed from the building.

T. B. Roche.—Patent swivel shackle. California invention. Very good.—Awarded a Certificate of Merit.

T. Desbarbieux.—Plaster model of a propeller. Different from anything before seen by your committee, and wholly beyond their comprehension.

J. Franklin.—Model of a ship. A pretty model of a sloop of war of the old school.

W. M. Ryan.—Model of vessel and carved walrus teeth. A very pretty model of a ship under full sail beating out of a harbor with pilot boat, tug and yacht in company. A novel representation and giving a very correct idea of reality. The carved walrus teeth are very attractive. The figures of the Goddess of Liberty, the Indian, the Highlander, Refugee, etc., etc. are well executed.—Awarded a Certificate of Merit.

E. C. Rowe.—Ivory model schooner. A pretty toy for children.

Mrs. A. Rogers.—Model steamship *Zoe*. A splendid specimen of a first-class sea-going steam propeller. The maker has exercised much patience and skill, and has produced a very satisfactory result.—Awarded a Diploma.

L. T. Lewis.—Model of a merchantman. A fine model of a small merchant ship, though pierced for 14 guns, and would pass very well for a war vessel.

Gustavus Jessen.—Model of U. S. steamer *Shubrick*, decked out in holiday attire, and for neatness is unsurpassed. Is a perfect model of the original.—Awarded a Certificate of Merit.

E. T. Barlow.—A patent anchor and chain. Very ingenious. Inventor entitled to credit. Old salts look upon the invention with some misgivings, as would be the case, no doubt, with any new and untried thing of so much importance as an anchor.—Awarded a Diploma.

H. B. Adams.—Two combination boat detaching blocks. No doubt a very good thing if understood by the operator.

Wm. Rumwell.—Model of a ship. A very pretty model of a sloop-of-war of the old school.

J. C. Cousins.—Two models of boats. One of life boat, model unexceptional. Of the steam tug, *Rescue*, her every day performance speaks for itself, as the mercantile interest of this port can testify.—Awarded a Diploma.

John Daly.—Model of schooner. Good carrier and fast sailer.

R. L. Ogden.—Model of yacht. Beautiful lines, and judge would sail fast if judiciously sparred and rigged.

S. Marion.—Model of ship. Well executed. A fast model and good carrier.—Awarded a Certificate of Merit.

Capt. Wylie.—A steamship and model of ship. Very pretty and a judicious model of a side-wheel sea-going passenger steamer. Model of a ship is good, and the name well chosen (General Grant).—Awarded a Certificate of Merit.

J. E. Thayer.—Four models of ships. Bark, of good lines, buoyant, and a fast sailor, no doubt. Yacht, of undoubtedly fast proportions. Schooner, very good, fast and buoyant qualities. Barkentine, very good; will perform all the builder claims for it.—Awarded a Diploma.

The foregoing report has been made by the undersigned Committee and is respectfully submitted.

A. T. Fletcher,
J. M. Selden.

CLASS V.

MILITARY ENGINEERING.

COMPRISING MILITARY ENGINEERING, ARMOR ACCOUTREMENTS AND ORDNANCE, SMALL FIRE-ARMS, TENTS AND CAMP EQUIPAGES, ETC., GUNPOWDER, AND OTHER EXPLOSIVE COMPOUNDS, MATCHES AND FIREWORKS.

The display in this class of the Exhibition was mainly confined to small fire-arms, gunpowder and other explosive compounds, matches and fireworks. In gunpowder and other explosive compounds, the articles exhibited were entirely of California manufacture, and as will be seen by the report of Committee annexed, showed a degree of excellence unsurpassed by importations. Considering that the oldest powder mill on the Pacific Coast has not been more than four years in active operation, meeting with a fierce competition from importations from the Atlantic States, the result of the trials made by the Committee is most gratifying to our people. During the late rebellion at times the difficulties in importing gunpowder were so great that the mining interest of California and Nevada suffered much from excessive high prices and very limited supplies. In fact, at one period the stock on hand of this necessary article was so reduced that many mines producing low-grade ores could not afford to pay the excessive price demanded, and therefore suspended operations. The powder mills of this State at first had to receive all their supplies of raw materials (with exception of charcoal), from abroad, and under many difficulties and expenses of transportation. At the present time, with exception of saltpetre or its substitute, nitrate of soda, all other materials are produced in California, and at prices that allow local manufacturers to compete successfully with importations, which latter are being gradually driven from our markets. The two local powder mills during 1868 made one hundred and three thousand eight hundred and eighty-one kegs and nine hundred and sixty-nine packages of the various grades of powder. While the construction of the Central Pacific Railroad caused an immense consumption of powder during 1868, which will not be repeated in future years, yet the opening up of the extensive and rich mineral regions in Eastern Nevada and Utah Territory, as well as easier access to Idaho and Montana Territories promises to largely increase the demand for the manufactures of our local mills. In fact, the consumption which has heretofore been considered enormous, promises to be soon dwarfed by the larger demand for mining purposes only.

In the production of matches and fireworks our local manufactories now monopolise the market to the almost total exclusion of importations.

San Francisco, Sept. 12, 1868.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute.

Gentlemen:—In obedience to your request, we, the undersigned Committee appointed to inspect and judge upon the merits of articles embraced in Class 5, including California-made matches, respectfully report:

After full and careful examination and testing we unanimously decide that the matches manufactured by the San Francisco Percussion Match Company are of a quality superior to any other presented for our inspection. Your Committee recommend a Diploma for same.—Awarded a Diploma.

John J. Haley,
Saml. C. Ellis, } Committee.
Henry J. Pippey,

San Francisco, Sept. 12, 1868.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute:

Gentlemen:—In compliance with your request, we, the undersigned, a Committee appointed to inspect and judge upon the merits of articles embraced in Class 5, respectfully report.

Messrs. Church & Clark exhibit fire-works of superior quality for which honorable mention is recommended.—Awarded a Diploma.

The Pioneer Fuse Company exhibit fuse of California manufacture which we have tested with Eastern make and find it equal in every respect. Diploma recommended. —Awarded a Diploma.

The shot guns manufactured by Messrs. Liddle & Kaeding are of superior excellence. We would particularly make mention of a breech-loading gun (the first manufactured in the State) as having many advantages over those of foreign importation. Also a shot gun stocked with California laurel which for beauty of finish and excellence of make could not be surpassed. Diploma recommended.—Awarded a Diploma.

Messrs. Schnieder & Browning's rifles we have carefully examined and find them (to our judgment) the most perfect on exhibition. Diploma recommended.—Awarded a Diploma.

JOHN J. HALEY,
S. C. ELLIS,
H. J, PIPPY,
Committee.

To the Managers of the Sixth Industrial Fair of the Mechanics' Institute.

GENTLEMEN: We, your Committee appointed to report upon Class 5, beg leave to submit, That before proving the Powder exhibited at the Fair by the California Powder Works and the Pacific Powder Mills, we called upon E. H. Parker, Esq., agent of the Hazard Powder Company, and Rodmond Gibbons, Esq., agent of Du Pont Powder Company, and requested them to supply us with samples of their manufactures for proof and comparison with powder manufactured in the State of California.

Although Messrs. Parker and Gibbons had made no exhibition, we desired to prove their powder for the satisfaction of the public, and compare the product of our local mills with those of the most reputed mills of the Eastern States. We were received by Mr. Parker in a manner that elicited our highest commendations. He expressed his entire willingness to participate in the experiments, accompanied us and remained with us during the testing, and in fine furnished us with every facility within his power. Mr. Gibbons declined to supply us with samples of the Du Pont Powder, upon the ground that he preferred to rest upon the established reputation of the Du Pont Mills.

Your Committee did not subject to proof the samples of Powder exhibited at the Fair, but went to the different magazines and themselves selected samples from packages destined for the trade. The various samples thus obtained, embracing sporting, cannon, musket, and blasting powder were subjected to divers proofs, the chief of which, and that upon which we most relied, was with the *Eprouvette* mortar charged with one ounce of powder and a twenty-four pound ball. After many days consumed in careful experiments—time which we freely bestowed because of the great interest felt in the question, both by the competing parties and the public, and after careful comparison of the results obtained, we found that all the powder submitted to test was of excellent quality. We also found that the superiority on the whole rested with the California Powder Works, and therefor recommend an award of a Gold Medal to that Company, and a Silver Medal to the Pacific Powder Mills.

JNO. J. HALEY,
HENRY J. PIPPY.

To the President and Board of Managers of the Sixth Industrial Fair, Mechanics' Institute, San Francisco.

GENTLEMEN:—Your Committee on Class 5, beg leave to make their final report. We have spent several days in testing the various kinds of Powder with an *Eprouvette*, with the following results. Test with one ounce of powder and twenty-four pound ball:

Pacific Mills, Marin County, 1st quality, 2 shots ("Black Diamond")	1933 feet 9 inches
California Powder Works, Santa Cruz County, 1st quality, 2 shots, ("Eureka")	1891 " 11 "
	41 feet 10 inches

Both of the above brands sell in the market at 90 cents per pound. The Black Diamond Powder showing best by 41 feet 10 inches.

Pacific Mills, Marin County, 2nd quality, "Hunter's Pride," 2 shots	1923 feet 8 inches
California Powder Works, 2nd quality, "Pacific Sporting," 2 shots	1987 " — "
	63 feet 4 inches

The price of the second quality above named is 65 cents per pound.

The "Pacific Sporting" showing 63 feet 4 inches better, and 31 feet 9 inches superior to the best and first quality of Powder tested of the California Powder Works.

California Powder Works, 3d quality, "Valley Mills," 2 shots,	1909 ft. 4 in.
Pacific Powder Mills, 3d quality, "Pacific Rifle," 2 shots	1804 ft. 8 in.
	104 ft. 8 in.

The price of the above named third quality is 40 cents per pound. The "Valley Mills" showing 104 feet 8 inches better, and 17 feet 5 inches more than the first quality of the "Eureka."

The California Powder Works sporting powder shows an unnatural gradation of power. Why their second and third quality should be so much stronger than their first quality, your Committee cannot determine. Your Committee has received a communication from the President of the Pacific Powder Mills, which may account for the unnatural gradation of powder.

In burning the three powders of the 1st, 2d and 3d grades of the California Powder Works on clean white paper, the same quantity each time, we were unable with a strong microscope to detect scarcely any difference in the grades. The Pacific Powder Mills powder showed a natural gradation both by Eprouvette and burning on paper.

Your Committee also tested cannon powder, with the following results:

California Powder Works, 1 shot, 24 pound ball, 1 ounce powder,	647 feet
Hazard Powder Company, " " " " "	629 feet
Difference	18 feet

California Powder Works musket powder, 1 shot, 24 pound ball, 1 oz. powder	947 ft. 10 in.
Hazard Powder Company, musket powder, 1 shot, 24 pound ball, 1 oz. powder	690 ft.
Difference	257 ft. 10 in.

Your Committee recommend the musket and cannon powder of the California Powder Works as being much superior to the Eastern or United States powder.

The blasting powder manufactured in California showed a decided superiority over the imported Eastern powder. The following result was obtained from one ounce of powder in an Eprouvette, 24 pound ball:

California Powder Works.		*Pacific Powder Mills.*	
F, two shots	259 ft. 9 in.	F, two shots	429 ft. 7 in.
IF, two shots	362 ft. 6 in.	IF, two shots	310 ft. 1 in.
IIF, two shots	400 ft.	IIF, two shots	216 ft. 6 in.

The burning test on white paper showed much better than Eastern powder. Pacific Mills, F, showed as clean as third quality of sporting powder. We tested the F in Oakland; it threw out some 25 tons or more rock in one blast of four pounds of powder.

We send to you the letter of the President of the Pacific Powder Mills and call your attention to the evidence he wishes to bring before you. The award of the medals for powder having been made by us before we received the letter. We believe now that we have no more to do with awards.

Yours, Respectfully,

H. J. Pippy.

I called on Mr. Haley and requested him to sign the above report, which he objected to. I then requested him to take the report home and look over it, and in the morning if he found an untruth in it he could then write out a report and I would sign it, which he refused to do. He then told me to give his respects to the President of the Mechanics' Institute, and say to him that he would sign no more reports on powder.

The report on Giant and Hafenegger powders will be sent in in a separate report, as they came in too late to compete for the medals.

Respectfully, Yours,

Henry J. Pippy.

REPORT ON HAFENEGGER POWDER.

To the Board of Managers of the Sixth Industrial Fair Mechanics' Institute.

Gentlemen :—Experiments were made with this powder at the labratory of the Hafenegger Powder Company, at Emery's stone quarry, upon boulders near Fort Point and on submarine rock near Mission Rock.

Hafenegger Powder No. 2.—With the Company's No. 2 powder the following tests were made : One quarter of an ounce (Troy weight) used in the Eprouvette mortar (the United States trial guage) threw a 24 pound ball 300 feet. This was compared with single F, California Powder Works powder a quarter of an ounce of which threw the 24 pound ball 20 feet.

Two tests were made at the quarry in blasting. The rock was a tough, hard, dark, blue stone, used for building purposes. The first blasting test at quarry was with one pound, Troy weight, of No. 2 Hafenegger powder. It was set in a drill hole 3 feet deep and 2¼ inches in diameter (tamped with damp clay). This blast threw out about 7 tons of rock, breaking it out in large pieces. The second blasting test was with three-quarters of a pound (Troy weight) of No. 2 powder set in a drill hole four feet deep and 2¼ inches diameter in the same quarry which threw out about 5 tons of rock. Both of these blasts were bound in at the bottom of the quarry where it required the greatest power to remove the rock. The blasts worked well down to the bottom of the drill holes and below them, doing good execution downward as well as upward, splitting the rock below the bottom of the quarry, and throwing it out in large pieces. The powder No. 2, tested as cannon powder, showed ten times the strength of U. S. Government cannon powder. Some of the powder No. 2 was made in my presence. It is composed of dry materials. Before mixing, the ingredients were tested before me and neither of them were explosive. These ingredients were then mixed by sifting them together through a brass sieve and the powder was ready for use.

The Hafenegger Powder Company proposes to sell and transport its powder, keeping the ingredients in two separate parcels, leaving the consumer to mix it as needed on the spot where it is to be used. In this way perfect safety in handling, transportation and storage will be secured, as neither part explodes by itself.

I can safely recommend this Hafenegger powder No. 2 as perfectly safe in handling and tamping when used like common powder in blasting. I recommend it for cannon shot, or shell and for blasting purposes. I believe a cavalry pistol one pound lighter than the present one and as effective could be made by using this No. 2 powder.

Hafenegger Powder, No. 1.—This could not be tried at the quarry, as the bottle containing the fluid part of the compound was accidentally broken on the road. This powder No. 1 is composed of two parts, one a powder and the other a fluid. Neither of these parts are explosive by themselves, but being united the mixture becomes a powerful explosive. This powder No 1 was tried on the ocean beach, south of Fort Point, on boulders of rock of about the same character as the stone at Emery's quarry. A large rock was chosen measuring 15 feet long, 9 feet broad, and 10 feet in hight. Into this a hole was drilled 1¼ inches diameter and 19 inches deep. This hole was charged with 2 ounces of No. 1 powder not tamped. The rock weighing about 35 tons was broken by this charge into numerous pieces in such a manner that it could be easily handled. Another rock 9 feet long, 5 feet broad, and 6 feet high, with a hole like that used in the last-mentioned test was charged with 1½ ounces of powder No. 1 not tamped. The discharge broke the rock into several pieces. Another rock, 4 feet by 4 feet and 3 feet high with a hole ¾ inch diameter and 18 inches deep was charged with one ounce of powder No. 1 untamped. The discharge shattered the rock thoroughly. The work done by the charges in these boulders was excellent, The fragments were not scattered to any great distance. The powder as well as the fluid used with it was handled with the greatest safety, and the fluid was kept separate until introduced and mixed in the holes or places where it was used.

A submarine blast was made with the powder No. 1 on a rock near Mission Rock in the harbor. A charge of one pound of powder No. 1 was lowered in a tin can upon the surface of the rock, and exploded when there was a depth of 3½ feet of water over the rock. The rock was perfectly flat with no possibility of putting the blast under any ledge. An examination made at low tide when the rock was left bare showed that about 3 tons had been blown away, over a ton of the broken pieces remaining loose upon the rock to be seen at this time. The rock was selected for the blast the day before (the blast was made), at low tide, when I made a careful examination of its shape, etc. The blast was set and exploded at time of high water and the rock was afterwards examined at low tide to note the effects.

Most of the blasts above mentioned were fired with the Hafenegger self-igniting match, also an invention of Mr. Hafenegger, and a great curiosity in itself. Ordinary triple tape fuse and water-proof fuse were used in the experiments, the fuse being lighted at its outer end by the self-igniting match which does away with the use of fire near the blast, thereby greatly lessening the danger of accidents by premature explosion from bad fuse. Both the powders above named were fired by a fuse or a spark like ordinary gunpowder. The self-igniting match is a fluid poured upon a piece of paper wrapped around the end of the fuse, which ignites in about three minutes after the fluid is poured on the paper, giving parties ample time to get away from the blast before an explosion.

In closing this report I would say that several applications have been made to the Hafenegger Powder Company for powder for blasting and quarrying purposes by miners and quarrymen. At my request the Company propose to give a large blast on Saturday of this week, the 28th of November, at 2½ o'clock, and invite the Board of Managers of the Mechanics' Fair, miners, quarrymen, express managers, common carriers, and members of the Press to be present. The blast will be made on the beach south of Fort Point. The company will provide an omnibus to carry the members of the Board of Managers and members of the Press, which will start from the Mechanics' Institute building on Post street, at 1 o'clock, P. M., promptly.

I am Respectfully yours, Henry J. Pippy.

SUPPLEMENTARY REPORT.

The blast mentioned in my previous report, as to be given November 28th, by the Hafenegger Co., after several postponements was made, and resulted as follows:

First rock blasted with 5 pounds of Hafenegger's weak (or No. 2) powder. The rock was 30 to 35 feet in diameter each way, and 25 feet in depth. Bored to the depth of 9 feet. Size of hole 1.3-4th inches. The discharge fractured the rock in every direction, from top to bottom. Estimated weight of rock 1,500 tons.

SECOND BLAST.—Rock about 38 feet long and over 20 feet wide and deep, partly bedded in sand. Estimated weight of rock 1,600 tons. Drilled 10 feet in depth, hole 1.3-4th in diameter. The powder used was 3 pounds of Hafenegger's strong (or No. 1) powder. The explosion knocked down about two thirds of the rock, making cracks entirely through the balance from top to bottom. But a small part of the rock was crumbled finer and the fracture was remarkably complete for so large a work. Some of the pieces blown off would probably weigh 20 tons.

The rock in both instances was a very tough cretaceus sandstone, bound partly by quartz.

Respectfully Submitted,

HENRY J. PIPPY.

CLASS VI.

CIVIL ENGINEERING AND ARCHITECTURE.

COMPRISING ENGINEERING, ARCHITECTURAL AND OTHER BUILDING CONTRIVANCES, SANITARY AND OTHER IMPROVEMENTS, ARCHITECTURAL AND RAILROAD AND BRIDGE DRAWINGS.

The field for the development of these branches of science in California is a large one and considering circumstances of time and place, has been already well explored The great area of the agricultural lands of the State. which mostly lie in large valleys with comparatively limited facilities for water transportation, calls imperatively for the construction of numerous railroads to admit of profitable farming. While yet in her infancy, with less than a tenth of her arable land enclosed, and a still less quantity cultivated, and a sparse population, several of the agricultural productions of California can be found in most of the great markets of the civilized world, and for their excellence of quality are unsurpassed by those of any other country. With less than two hundred thousand persons, women and children included, engaged in farming, and but the rim, as it were, of her lands cultivated, the State ranks third in the Union for production of wheat and barley, and has exported to foreign countries in 1868 a larger quantity of those grains than all the other States combined. With these capabilities of soil and climate, it only needs an influx of industrious population to settle up the State and develope its agricultural wealth, to insure unusually profitable returns from passenger and freight transportation in almost any section. The topography of the country presents but few obstacles to the building of railroads cheaply, while the great bulk of all agricultural products must find profitable sale and outlet to other markets through cities on San Francisco Bay.

In architectural and other building contrivances, sanitary and other improvements, the cities of California present openings for architects and others, unsurpassed in the United States. All the cities are newly built, and at such times and with such materials that changes in structures are constantly demanded to meet the requirements of a more cultivated taste, and the increased exigencies of business. With a population drawn from every quarter of the globe, of a thoroughly cosmopolitan character, every variety of design in building has its particular advocates and architectural skill a broad field for display. Under these circumstances there is more architectural talent employed and a greater variety of design in construction of buildings, than in any towns of similar population in the other portions of the Union.

Considerable progress has also been had in sanitary and other improvements, many valuable inventions in connection with sewers and buildings having been patented from the Pacific Coast. The display of these inventions at the Exhibition was both large and interesting.

To the Committee of Managers of the Mechanics' Industrial Fair, 1868.

GENTLEMEN :—Your Committee appointed to act as "Judges of Award" in Class No. 6, beg leave to report—

That they have duly examined the several articles on exhibition belonging to this Class, and would recommend as deserving honorable mention—

Swyney & Smith's exhibit of Suspension Bridge Drawing as being a neat and carefully executed piece of work.—Awarded a Diploma.

A. C. Taylor's Kitchen Sink and Hopper, with self-cleaning trap, which article is of useful design, and must prove of great practical benefit as a sanitary appliance, we give a favorable report.—Awarded a Diploma.

J. W. Pearce's model of inclined Track for Mines, is an ingenious and simple device, and clearly practical.—Awarded a Certificate of Merit.

Dr. Beers' Improved Railroad Car and Track is an ingenious device, but is probably impracticable in view of the expense attending its adoption.

Charles Darber exhibits a model of section of Foundation of Railroad Bridge and Post. This is an imperfectly constructed model, and does not clearly illustrate anything but carelessness on the part of the exhibitor, and rather tended to mystify your Committee than help them to an intelligent conclusion as to its merits.—No Specification.

H. Lombard exhibits Patent Chimney Top.—No Specification.

W. M. Haynie, Sacramento, exhibits model of Patent Hop Kiln.—No Specificaion.

Wm. McKibben exhibits Metal Sewer Valve or Bell.—Awarded a Diploma.

Wm. O. Murtha exhibits Patent Chimney Top.—No Specification.

Your Committee would here call attention to the necessity of exhibitors furnishing specifications with such devices as may not in themselves be clearly self-explanatory, and where the exhibitor is not himself present with his goods to give the necessary explanations. The importance of this cannot be overrated, although your Committee have found it almost entirely unappreciated by exhibitors in this Class.

Respectfully submitted,

Geo. Pardy, }
H. C. Macy, } Committee.

CLASS VII.

Philosophical, Surgical and Dental Instruments.

The manufacture of philosophical, surgical and dental instruments in California though not extensive, is yet very complete, almost all varieties of work of ordinary dimensions being made to order in San Francisco. The business, though in its infancy, is practiced in all of the above-named branches, the mechanics employed being very skillful, and turning out work equal in materials and finish to those produced in any other city in the United States. The high price of skilled labor, however, and limited market for these instruments, has heretofore prevented any large increase in the business, but the early completion of the Pacific Railroad, by affording speedy and cheaper access to the interior of the continent will probably soon make a favorable change in this as well as in other branches of manufacturing trade.

For mathematical and engineering purposes our workshops produce as fine instruments as can be found in any portion of the globe, specimens entered for competition in the Exhibition, for their accuracy of detail, delicate adjustment, and beauty of finish, eliciting the commendation of all competent judges who examined them. In this particular branch of scientific manufactures the work of our local shops stands pre-eminent above importations, some of the finest instruments used by surveyors having been made in this city.

In dental and surgical instruments our manufacturers have to compete with importations from the best workshops in the Atlantic States and Europe, and as a consequence, the increased cost of the domestic-made goods is a serious drawback to their extensive sale.

In practical dentistry in all its branches California is not behind any other State in the Union The profession is quite numerous, and is composed of parties from all sections of the United States, many of whom for their peculiar skill would hold high rank wherever known. Many important improvements have also been invented and patented by members of the faculty in California, which have been highly commended elsewhere.

CLASS 7—SECTION 1.

Philosophical and other Instruments, and the Processes in which they are used; Mathematical, Nautical and Engineering Instruments.

San Francisco, Sept. 22, 1868.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute.

Gentlemen:—The Committee, or Judges of Award, to whom were referred the examination of Class No. 7 (section 1) articles registered as follows:

T. Houseworth & Co.—Optical Goods.
J. Roach.—Mathematical Instruments.
Fire Alarm Telegraph Co.—Telegraphic Instruments.
Lundberg & Marwedel.—Fire Alarm Instruments.
California Business University.—Telegraph Apparatus.
Pacific Business College.—Telegraph Apparatus.
Fairbanks & Hutchinson.—Scales and Money Drawers.
F. H. Pratt.—Adjustable Scale Column attached to Fairbanks' Scale.

Have the honor to report that they have examined the articles in the list and respectfully recommend that a Gold Medal be awarded to John Roach for his Solar Compass with a Telescope attached.—Awarded a Gold Medal.

To Lundberg & Marwedel, a Silver Medal for a Fire Alarm Telegraph.—Awarded a Silver Medal.

Fire Alarm Telegraph Co., a Silver Medal for a Telegraph Instrument.—Awarded a Silver Medal.

T. Houseworth & Co., a Silver Medal for the best assortment of Optical Instruments.—Awarded a Silver Medal.

F. H. Pratt, a Diploma for an Adjustable Scale Column attached to Fairbanks' scale.—Awarded a Diploma.

Fairbanks & Hutchinson, a Certificate of Merit for Weighing Scales with Money Drawer.—Awarded a Certificate of Merit.

This report has been delayed beyond the usual time by the fact that owing to two of the Committee living in the country it was not possible to get the action of a majority of the Committee, until one of the gentlemen from the country, Mr. Dyer, came in on the 21st inst., when we agreed on the report above.

Very respectfully submitted for the Committee,

SHERMAN DAY, Chairman.

Judges of Award : Sherman Day, Wm. Smoltz, Herman Shussler, E. H. Dyer.

CLASS 7—SECTION 2.

Surgical and Dental Instruments, Dentistry in all its Branches.

To the Managers of the Sixth Industrial Fair of the Mechanics' Institute, 1868.

GENTLEMEN :—Your Committee beg leave to make the following report :

For teeth mounted on American vulcanite, first Diploma to Cogswell & Woodward.—Awarded a Diploma.

For teeth mounted on gold plate, D. S. Hutchinson, first Diploma.—Awarded a Diploma.

For teeth mounted on American vulcanite, second premium to Dr. G. W. Cool.—Awarded a Certificate of Merit.

The gold-lined vulcanite work exhibited by Dr. Cool is worthy of honorable mention.

Dr. E. O. Belle exhibited some interesting specimens showing the comparative anatomy of the teeth, also an apparatus for the local application of cold for rendering the extraction of teeth painless, and for which a premium was awarded at the last Fair.

Dr. H. W. Calvert exhibited samples of artificial teeth of his own manufacture, which the Committee believe to be equal to any imported ; also specimens of conundrum grinding wheels of excellent quality. Special award recommended.—Awarded a Silver Medal.

Dr. A. Folleau exhibited a number of orthopedical instruments, including ingenious apparatus for remedying the deformities produced by hip-joint disease, curvature of the spine, club foot, etc., etc., also an artificial leg, all of his own manufacture, for which the judges would recommend a special premium.—Awarded a Silver Medal.

In the opinion of the Committee the best artificial leg is the Douglass leg, exhibited by H. N. Cook, agent.—Awarded a Diploma.

(Signed)

JAMES BLAKE, M. D.
DR. C. C. KNOWLES,
DR. H. AUSTIN.

CLASS VIII.

Steel and Iron Manufactures, Brass, Copper, Tin, Lead and Composition Manufactures.

In manufactures of the above named metals great progress has been made in California within the last five years, some of the new enterprises being of such magnitude as to be able to supply the entire demand for the Pacific Coast. During the period named, the iron foundries and machine shops have been added to in numbers, and enlarged in capacity, so as to be able to manufacture all articles in their respective lines that may be required, for both domestic consumption or export demand. Quite a number of the prominent foundries in this city now have lathes and other tools of such dimensions as to be able to do any work that the largest steamers that ply from this port to Panama or China may need. It is also quite probable that the discovery of extensive beds of iron ore. cheaply accessible to fuel and transportation to San Francisco, will, in connection with the vast tracts of ship building timber at Puget Sound, cause the construction of the largest ocean steamers at those points that may be needed to accommodate the growing freight and passenger travel on the Pacific.

The completion of the Pacific Rolling Mills at San Francisco, during the past year, has made a most valuable addition to iron manufactures, as by it the entire production of scrap iron on the coast, which hitherto was either wasted or shipped at small value to the Atlantic ports is utilized, and manufactured so as to supply a considerable part of the domestic demand. The mills, although not in full operation, already make many varieties and sizes of rod and bar iron, and will in time doubtless furnish all styles of manufacture suitable for the domestic trade.

The demand for iron shutters, doors, and similar work is entirely supplied by our local shops, some of which also do considerable business in manufacturing bank and other burglar-proof safes.

Considerable quantities of tools, hardware, cutlery and edged tools are made in San Francisco, as also saws of all kinds and wire work.

The local brass foundries produce all kinds of work required, as well as bells, the latter being noted for their large volume of sound and excellent tone. Fully $150,000 worth, or three-fifths of the consumption of brass work on the Pacific Coast, is furnished from the foundries in San Francisco.

All stills and other copper work needed in the State, are furnished by the mechanics of San Francisco, as is also the case with tin and composition manufactures. The great increase in the production of grapes in California, as well as grain, will soon make one branch of copper work, viz., still making, most important, the more especially as it is the only section of the United States capable of furnishing pure grape spirit in large quantities. Within the next decade California brandy will prove a formidable competitor to the products of France, Germany and Spain, and judging by the rapid advancement in quality, by experience and care in distilling, aided by improved stills, the domestic-made brandy may then have a virtual monopoly of the markets of the United States.

The manufacture of lead, which is confined to the operations of the San Francisco and Pacific Shot and Lead Works, is of the most extensive nature. This company produced in 1868 about two thousand tons manufactures of all kinds in that metal, which for quality have no superiors elsewhere. The local manufacture now supplies fully half of the demand on the Pacific Coast, and the works having a much larger producing capacity, will doubtless in time drive out all importations. During the past year these works have been largely supplied with material extracted from galena ores from Arizona Territory, Nevada and this State, the reduction or smelting of the same being successfully engaged in at their branch works located near Black Point, San Francisco. The numerous deposits of galena found in this State will in time probably furnish sufficient supplies to meet all the local requirements for lead manufactures, and possibly a considerable export demand.

CLASS 8—SECTION 1.

Plain and Ornamental Castings, including Stoves, Wrought Iron Work, Shutters, and General Blacksmith Work.

To the President and Directors of the Mechanics' Institute Fair, 1868.

Gentlemen :—The Committee on Class No. 8, beg leave to submit the following report :

Misgill & Cooper, premium for horse-shoes, superior workmanship. Honorable mention of protecting plate for horses' feet.—Awarded a Certificate of Merit.

BETTS & TOOKE'S California-made buggy springs; no competition; recommend a Diploma.—Awarded a Diploma.

D. JONES, Axle-trees, California manufacture and patent; no competition; recommend a Diploma.—Awarded a Diploma.

VULCAN IRON WORKS; perforated grate bar exhibited.

ÆTNA IRON WORKS exhibit "Bemis's Grate Bar" which is the best; recommend a Diploma.—Awarded a Diploma.

W. S. KELLUM; not found.

L. CHELLIS, house safe, California manufacture, honorable mention.—Awarded a Certificate of Merit.

A. C. TAYLOR, for cooking stoves of California manufacture and patent, possessing real merit; recommend a Silver Medal.—Awarded a Diploma.

TAY, BROOKS & BACKUS, JOHN BOHN, HOLBROOK & MERRILL, for display of Eastern made stoves, each an honorable mention.

PACIFIC ROLLING MILLS as an enterprise of most benefit to California in our class, we recommend a Gold Medal.—Awarded a Silver Medal.

KITTREDGE & LEAVITT, JOHNATHAN KITTREDGE, California-made safes.

JOHNATHAN KITTREDGE, a Diploma for best bank safe.—Awarded a Diploma.

KITTREDGE & LEAVITT, a Diploma for best finished safe.—Awarded a Diploma.

(Signed)
IRVING M. SCOTT,
H. S. SMITH,
CHAS. R. STEIGER,
JOHN R. SIMS.

CLASS 8—SECTION 2.

Tools, Hardware, Cutlery and Edge Tools, Locks and Keys, and other Fastenings, Wire Work.

To the Board of Managers of the Mechanics' Industrial Fair, 1868.

The undersigned committee to whom was referred Class 8, Sec. 2, of articles on exhibition, beg leave to report as follows:

We would award the "Gold Medal" to the Pacific Saw Manufacturing Co., for the best display of California-made Saws, Tools, etc.—Awarded a Silver Medal.

Silver Medal to M. Price for finest display of Cutlery. —No award made by the Board of Managers.

Silver Medal to Will & Finck, for best exhibition of Surgical and other Instruments, etc.—No award made by the Board of Managers.

First Class Diploma to the following parties:

H. T. Graves, for sample of Wire Goods and Weather Strips.—Awarded a Diploma.

N. W. Spaulding, for Inserted Tooth in a Circular Saw.—Awarded a Diploma.

W. C. Bussey, Improved Combination Safety Lock.—Awarded a Diploma.

Pacific File Works, California-made Files, Sections, etc.—Awarded a Diploma.

Nelson & Doble, Blacksmiths', Miners' and Stone Cutters' Tools.—Awarded a Diploma.

W. A. Sublett, improvement on Window Supporter.—Awarded a Diploma.

B. Riley, for Adjustable Tongs.—Awarded a Diploma.

Chas. Watson, for set of Tools for Cutting Threads.—Awarded a Diploma.

Second Class Diplomas to the following Exhibitors:

H. J. Booth & Co., Quartz, Slot and Grain Screens.—Awarded a Diploma.

Will & Finck, for Bell Hangings.—Awarded a Diploma.

J. Weichart, for Edge Tools.—Awarded a Diploma.

F. Shoener for Spoon Metal.—Awarded a Certificate of Merit.

A. M. Seabury, for Patent Wood Saw and Stretcher.—Awarded a Certificate of Merit.

P. Quigley, for California-made Carpenter Tools.—Awarded a Certificate of Merit.

Third Class Diploma to the following persons:

Pacific File Works, for Reaper Section, etc.—Awarded a Diploma.

J. Gray, for Broom Wire.—Awarded Diploma.

Wm. M. Henry, Combination Brace or Boring Machine.

Carl Heeps, for Carving Tools.

The following persons we desire to have honorable mention made to them for their display of articles:

V. T. Wilbert, for Patent Safety Hook.

J. A. Hoffman, for Patent Shutter Holder.

S. M. Briggs, for Patent Mitre Box.

N. Hoffman, for Flower Stand.

Boone & Lumsdell, for Sail Needles.

B. L. Stone, for Burglar and Travellers' Alarm.

C. Otto & Co., for Machinists' Tools.

N. S. W. Parkhurst, Combination Lock and Patent Money Drawer.

E. Dudgeon, for Hydraulic Jacks.

Barker Spring and Butt Co., Concealed Door Spring and Reversible Joint Butt.

Alfred Swingle, Gear Drill.

Call Bros., V. S. Patent Vices.

Robert Hewson, for Friction Roller Parlor Skates.

L. D. Craig, for Combination Hair Cutting Shears.

W. M. Kewan, for Center Radiation and Adjustable Square.

D. F. Barrows, for Jenks' Patent Window Springs.

J. H. Culver, for Improved Callipers.

American Saw Co., Emerson's Patent Saw Tooth and Circular and Cross Cut Saws.

S. F. Screen Works, for Quartz Screens.

O. B. Oakley, for Door Plates, Bell Hanging, etc.

Millers' Adjustable Saw Tooth Co., Patent Tooth for Circular Saw.

Frank Axle, Gridley's Patent Weather Strips.

(Signed)

RUP'T SIMS,
WALTER N. HAWLEY,
J. McGILL
JOHN HEWSTON, JR.,
A. A. LOUDERBACK.

CLASS 8—SECTION 3.

Castings of Tin, Brass, and other Metals, Brass Finishing.

To the Committee of Managers of the Mechanics' Fair, 1868.

GENTLEMEN :—We, the undersigned Committee, do most respectfully submit the following as our report upon articles embraced in Class No. 8, Sec. 3.

In making a careful examination regarding the quality, fine finish, and large display, including Brass Castings, Cannon, Bells, etc., we award to W. T. Garratt the first premium, and in so doing we all agree that he deserves the greatest credit for energy displayed in developing so useful a branch of home manufacture.—Awarded a Silver Medal.

We also take great pleasure in awarding the second premium to Messrs. Gallagher & Weed for their display of Brass Goods of all descriptions, and would state that we feel proud that this branch of manufacture has met with success enough to compete with imported goods in this line.—Awarded a Diploma.

We have examined carefully and are greatly pleased with the display of Gongs, Annunciators, etc., made by Messrs. Will & Finck. They deserve great credit for the finish and workmanship displayed on their goods, and we award to them the first premium for this particular style of goods.—Awarded a Diploma.

We have also noticed the display of Gongs, Bells, etc., made by Garvey & Kimball. They deserve more than a passing notice considering the mechanical arrangement for striking the Gong, a very effective and simple improvement upon the old style, and therefore we award to them the second premium for this particular article.—Awarded a Certificate of Merit.

In our examination of the Safety Valve for Fire Hose, invented by C. E. Blake of this city, we find much merit, it being an important attachment to all Fire Hose, and more especially when used in connection with a steam fire engine. We would therefore award it a Special Premium.—Awarded a Diploma.

We notice a new style of Hose Coupling, invented by C. Allison, which deserves some notice. Awarded a Certificate of Merit.

We also have examined a new style of Water and Steam Cock invented by P. Caduc, which should be noticed, as a California invention.—Awarded a Certificate of Merit.

The patent Self Oiling Cups on exhibition by R. F. Ashburn, have been noticed by us, and no doubt possess some merit.

(Signed)

J. M. Eckfeldt,
J. W. Brittan,
W. W. Montague.

CLASS 8—SECTION 4.

Copper Stills, Worms, Pipes and General Work, Lead Pipe, etc.

To the Committee of Managers of the Mechanics' Institute Fair, 1868.

Gentlemen :—We the undersigned your Committee on Copper Stills, Lead Pipes, Tinned Ironware, etc., have carefully examined the different articles in the foregoing list, and report as follows :

Millikin & Johnson, Self-soldering Cock for Tin Cans, etc., which we consider a useful invention.—Awarded a Diploma.

R. B. Thomas, Submerged Coffee Boiler, was tested by your Committee, who think it is worthy of favorable mention.—Awarded a Certificate of Merit.

C. Newman's Glass Smelting Pot. This Pot is so constructed that it can be used for making different kinds of Glass, a matter of great importance when making glass in California. The invention possesses great merit. (See Inventions.)

C. Newman's Lamp Burner when Coal Oil is used, a safe and useful arrangement.—Awarded a Diploma.

Holbrook & Co., Sacramento. The finest Iron Ware manufactured by them we consider important, being as we believe the first made in the State. We wish to see every enterprise of the kind encouraged.—Awarded a Diploma.

T. H. Selby & Co. Lead Manufactory and Lead Smelting Works. The sample of Lead and Tin Pipes, Sheet Lead and Shot exhibited, are equal to the very best imported, and very creditable to those who conduct the works.

The Lead Smelting Works in connection with the Manufactory was visited by your Committee, who feel that they can hardly say too much on the importance to the State of such an establishment. The miner can now find a ready market for the lead ore and silver lead ore which they have not been able to do heretofore.

Your Committee consider the Manufactory and Smelting Works deserving of the Institute Medal, and strongly recommend your awarding it to them-—Awarded a Gold Medal.

(Signed)

Melville Attwood.
Chas. W. Smith,
W. S Snooks.

CLASS IX.

Glass, Pottery, and Clay Ware, Comprising all articles made from Glass or Clay, Glass Blowing, Cutting and Coloring ; Common Pottery, Stone Ware ; Crockery and Porcelain ; Fire Brick and Fire Proof Ware ; Common and Pressed Brick and Tiles, Cement.

The display in the Exhibition of a portion of the above named articles was both large and attractive, and reflected great credit on the parties making them. The isolated situation of California, so far removed from the other States of the Union, or foreign countries which produce the articles in this class, makes their domestic manufacture extremely valuable to the Pacific Coast. Glass blowing in particular has had a most favorable and important bearing on many other branches of trade which were laboring under great disadvantages when their whole dependance for glass ware was on importations, as persons engaged in pickling and preserving fruits and vegetables had to send their orders and invest large amounts in shipments from the Atlantic States, fully six months before the season for using them in California arrived. Besides the loss of interest and curtailment of operations from large investment of capital caused thereby, a very large per centage of the glassware shipped became broken while in transit, and with cost of packages, shipping charges, insurance and commissions added, formed a large item in the value of the goods when landed at their port of destination. The business was also attended with the additional risks of loss of vessels or delayed passages of same, by which it frequently happened that shipments of glassware being lost or delayed beyond the season of putting up fruits the business of parties for that year entirely failed.

The vast business in bottling of native wines and liquors also had either to depend upon direct importations from the Atlantic States and Europe, or the sole supply was derived from second-hand bottles that had been imported with foreign liquors, the flavors of which could not always be removed by washing. The dependance upon second-hand bottles was also attended with increased breakage in use, and often cases of extortion in exhorbitant prices charged by the collectors of the same, who frequently combined for such purpose. The value of domestic glass blowing to the Pacific coast, cannot therefore be limited to the actual cost of importations laid down in California, as many other branches of trade were often disastrously affected to a much larger amount through the contingencies attending the same. San Francisco contains the only two glass works ever erected on the Pacific coast, the product of each though differing somewhat in variety, having been fully equal to $250,000 per annum, where in full operation. At the present time only one establishment, the Pacific Glass Works remains. This work confines its operations to making colored glassware, it having only one open pot furnace which prevents the making of other varieties of ware. The demand for colored glass is, however, largely in excess of its manufacturing capacity, considerable quantities having also been made by the San Francisco Glass Works, which were partially destroyed by fire in June, 1868. This latter works made all varieties of glassware suitable for ordinary purposes, the closed pot furnace that it contained being able by the use of Newman's patent smelting pot, to produce colored glass as cheaply as in the open furnace which is always used elsewhere. The loss of these works has been severely felt by many branches of trade for which it manufactured largely, and the efforts now being made by Mr. Newman, the former proprietor, to establish a much larger works, promises soon to be successful.

In common pottery the entire trade is supplied by local works, the largest of which is established at Antioch, on the San Joaquin river, near its mouth. The Golden State Pottery at that place turns out as fine specimens of the ware of all desired sizes as can be had elsewhere. Several other potteries in the suburbs of San Francisco, also make good pottery, and in large quantities. Several extensive deposits of kaoline, or true porcelain clay, having been found in the State, it is probable that the manufacture of fine ware will be engaged in before many years. The principal and most accessible deposits of kaoline so found is in Mendocino county, on the coast, the location being so convenient for shipment that vessels can be loaded by shutes direct from the mine. This clay has been manufactured into fire bricks, which on being tested have stood excessive degrees of heat, better than the best imported fire bricks in similar places.

Among other manufactures in California, are those of asphaltum, which is largely used for making drain pipes, as well as for pavements, roofing and coating for vaults. In making pipes for drains and sanitary purposes, asphaltum has been found to be superior to any other material heretofore used. The display of various styles of asphaltum manufactures at the Exhibition, was both very extensive and valuable, and appearances are that in time its advantages will become so favorably known for many purposes, that a considerable export may be made to meet demands of cities on the Atlantic Coast. The deposits of the mineral in the southern counties of this State, are very extensive and easily accessible for shipping.

California possesses very extensive deposits of cement stones, which when properly prepared for use make most excellent cement, its quality for hydraulic purposes being fully equal to the best, and better than most of various kinds of cement imported. The principal deposit of cement stones yet discovered in this State, and the only one so far worked extensively, is located on the Strait of Carquinez, about two miles south of Benicia. The Benicia Cement Company, which owns the property along the shore, have extensive works for making cement, which in the hands of the present management, enjoys a high reputation in this market. As its merits are becoming better known, the domestic cement is gradually driving importations from the Atlantic States out of the market. All the Government works on the Pacific Coast, as well as the sea-wall or bulkhead, at San Francisco, and other State works, use the Benicia Cement in preference to Eastern.

To the Committee of Managers of the Mechanics' Institute Fair, 1868.

GENTLEMEN:—The undersigned Judges of Award on Glassware, Pottery, Clayware, etc., etc., exhibited at the Mechanics' Fair, for 1868, respectfully beg leave to recommend to the Board of Managers of the Mechanics' Institute, that the following awards be made:

To the San Francisco Glass Works, for the best exhibition of California-made glassware, a Gold Medal.—Awarded a Gold Medal.

To the Pacific Glass Works, for California-made glassware, a First Diploma. Awarded a Diploma.

To Noble & Gallagher, for the best specimen of embossed glass, a First Diploma.—Awarded a Diploma.

To R. Mills, for the best display of stained glass, First Diploma.—Awarded a Diploma.

To A. Mussard, for the best specimen of engraving on glass, First Diploma.—Awarded a Diploma.

To John Mallon, for best specimens of glass cutting, First Diploma.—Awarded a Diploma.

To Thomas O'Neil, for specimens of glass cutting, Second Diploma.—Awarded a Certificate of Merit.

To R. A. Swain, for the best display of chinaware and fancy articles, First diploma.

To Haynes & Lawton, for specimens of glassware, etc., Honorable Mention.

To Golden State Pottery, for display of pottery, a Silver Medal.—Awarded a Silver Medal.

To Skinner & Flick, for the best sanitary cement drain pipe of California invention and manufacture, a Silver Medal.—Awarded a Silver Medal.

To the Pacific Cement Co., for their exhibition of side walks, roofing and drain pipes, a First Diploma.—Awarded a Diploma.

To Benicia Cement Co., for water-proof cement, First Diploma.—Awarded a Diploma.

To Knapp & Grant, Roman Cement, Honorable Mention.

To Menant's Asphaltum Co., for specimens of asphaltum; honorable mention. Awarded a Certificate of Merit.

(Signed)

L. M. KELLOGG,
R. H. McDONALD,
N P. LANGLAND,
I. E. DAVIS.

CLASS X.

Wood and Wood Work, Cooperage and Wooden Ware.

The manufactures in this branch of industry are very extensive, and supply almost the entire consumption for the Pacific coast. The only exceptions are limited quantities of fine woods for cabinet and furniture purposes, which are imported, and considerable portions of willow ware, brushes and cooperage, the latter largely for wine purposes. Most of the softer varieties of woods can be had in abundance for ordinary uses in the mountain ranges of California and the States and Territories further north. There is, however, a notable deficiency in the supply of harder woods, such as are needed for cooperage, wagons, agricultural machines, tools, and similar purposes, almost the entire supply for the former being imported. The exception is an excellent variety of oak, which is found in limited quantities in a few localities in this State and northward along the Pacific coast, the wood making wine casks of superior quality.

The only furniture or cabinet woods yet found are Oregon maple and California laurel, both of which possess great beauty and are being used extensively in manufactures. California laurel, in particular, is being largely manufactured, it not only possessing a fine natural color and grain, but admitting of staining and polishing to such a high degree of perfection that imitations of rosewood, mahogany, satin wood, black walnut, and other fine woods, by competent artists, have deceived all but the most experienced persons.

In the manufacture of wine casks a very extensive business is done, both from new staves and old work, the demand absorbing all the latter that is imported. One of the greatest difficulties and heaviest expenses encountered by wine growers is the lack of good casks procureable at reasonable prices. The discovery on the Pacific Coast of wood suitable for wine cooperage would be very valuable, and it is to be hoped that the proposed exploration of the northern portion of Alaska by the Coast Survey, in 1869, under Professor Geo. Davidson, will be successful in that particular. It has long been reported that birch, ash, and some varieties of good oak timber have been seen in considerable quantities in Northern Alaska, and one of the purposes of the Coast Survey during the coming year is its discovery, if possible.

All kinds of wooden ware are made in California from native woods, the production of them being so extensive as to entirely preclude importations. The manufacture is confined to two establishments in San Francisco, viz., Messrs. Elam & Howes and Armes & Dallam, who supply the demand for the Pacific coast, besides some exportations.

CLASS 10—SECTION 1.

Comprising Native and Foreign Wood, Sawed Timber or Lumber, and its uses; House Carpenters' and Joiners' Work, Scrolling, Turning, Moulding and Carving.

To the Executive Committee of the Mechanics' Institute Fair, 1868.

Gentlemen:—The undersigned Judges of Award of the First Section of Class 10, have attended to the duty assigned them, and beg leave to report the following:

Blyth & Wetherbee, entered a stick of timber, 32 by 28 inches, and 48 feet long. It is designed for the San Marcial Mining Company, in Mexico, and deserves special mention.

J. E. Thayer, for California laurel wood, of fine quality. Awarded a Diploma.

J. Perkins, veneer and wall hangings of wood; various samples and of fine quality; imported.

A. Cameron, wood and ivory fruit baskets, of fair workmanship.

Sheppard & Carwell, California-made lasts, beautiful in shape and finish. Awarded a Diploma.

J. E. Thayer, stick, or log of California Laurel, 25 by 20. and 50 feet long. The largest piece ever brought to San Francisco. They are deserving of special mention.

J. G. North, stem knee, a marked feature of California production; well prepared. Awarded a Certificate of Merit.

H. E. Perry, model of wood pavement, very compact in appearance.

J. W. Linsley, hat and wig blocks; made by hand and with good taste. Awarded a Certificate of Merit.

P. Gibot, spiral staircase model. Possesses no merit over those now in use.

O. E. H. Sturcken, improved window frame. Its principal merits are, it is weatherproof, easily cleaned, will not rattle; easily worked and durable. Awarded a Diploma.

C. Roemer, California polished wood, very inferior.

P. H. Flick, Anatomical last, of fair proportions.

Springer & Knowland, good assortment of Sugar Pine.

Jas. Bekrens, Tesselated Pavement; well executed and fair proportions. Awarded a Certificate of Merit.

Bryant & Strahan, carved side-board; beautiful in design, and executed with artistic skill rarely found in this State, we believe it to be in design and workmanship the finest piece of carving in the United States, and we recommend the award of a Gold Medal.—Awarded a Silver Medal.

The specimens of laurel woods, consisting of branch and veneers in their unfinished state, entered by John, D. Boyd, claim your consideration. We believe it is owing to the energy displayed by Mr. Boyd for several years past. in introducing this native wood, that we are indebted for the very many samples of furniture with which our Fair is graced; we believe that no man in this city has done so much, and, therefore, recommend that he be awarded a Silver Medal. Awarded a Silver Medal.

The carved Black Walnut (gold) Picture Frame, entered by Snow & Roos, is a beautiful specimen of workmanship, and we would recommend the award of a Diploma —Awarded a Diploma.

B. H. Freeman,
N. P. Langland,
James Easton.

CLASS 10—SECTION 2.

Comprising Manufactures of Casks, Barrels, Kegs, Tubs, Pails, etc. Brushes, and Willow Ware.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, 1868.

Gentlemen:—The Committee on the Second Division of Class 10, would report as follows: We award to Elam & Howes, for varied display and fine workmanship of woodenware; a Gold Medal.—Awarded a Gold Medal.

To Figel Bros., for very superior workmanship of California-made brushes. A Silver Medal, or next highest reward. Awarded a Diploma.

Feldman & Co., for fine and varied display of California-made brushes. Awarded Certificate of Merit.

Zan & Co., display small fine lot of brooms: honorable mention.

Thurnauer & Zinn, for fine display of Toys, Willow Ware, etc. Awarded a Certificate of Merit.

California Wine Cooperage Co., for wine casks, of superior workmanship Silver Medal if may be, or very honoroble mention. Awarded a Silver Medal.

Pacific Barrel and Keg Co., forfine display of barrels, kegs, etc.; honorable mention. Awarded a Diploma.

Patterson's Washing Machine, a combined washer and wringer, we deem the very best Machine in its class; honorable mention. Awarded a Diploma.

F. B. Lamb, for Washing Machine, "Pioneer Washing Machine;" honorable mention. Awarded a Certificate of Merit.

F. T. Houghton, for Automatic Clothes Washer and Boiler; honorable mention. Awarded a Certificate of Merit.

P. Rasmunson, California Washing Machine; honorable mention. Awarded a Certificate of Merit.

J. N. Seely, for a Churn and Mop Wringer: honorable mention. Awarded a Certificate of Merit.

San Francisco, Sept. 12, 1868.

(Signed,) O. W. Easton, Chairman.
P. M. Bown.

CLASS XI.

MINERALS—COMPRISING ALL CLASSES OF MINERALS AND MINERAL SUBSTANCES, COAL, Etc.

The mineral wealth of California, and the adjacent States and Territories, is so extensive and varied in its elements that only the principal and most valuable ores can be alluded to within the limits of this brief sketch. In the production of the precious metals, California, by the yield of her gold mines, has literally revolutionized the civilized world. From the first practical discovery of the immensely valuable deposit of gold throughout the State, in 1848, a rapid, steady change in monetary values of property of all kinds has occured, while the wages of labor have also been generally increased, both in the United States and Europe. Manufactures of all kinds have everywhere been stimulated to higher degrees of excellence, by the increased and profitable demand for them for luxury and comfort.

A new era of Commerce in sailing and steam vessels was created througth the demands of California. The first were needed to quickly transport most of the known and valuable products of the world to our markets, and the latter to convey a tide of emigration, seeking for the precious metals, in such numbers as had never before been seen. All the different nationalities of Europe, as well as of America, and even Asia, contributed largely of their people, and furnished supplies of their products to feed and clothe the many thousands whose tastes still clung as it were to their native lands. From a weak, isolated colony, whose population, though stretched over a vast expanse of territory, scarcely attained the rank of tens of thousands, at once arose a powerful State, which became a most valuable and important portion of the U. S. Probably no State contributed more material aid to the General Government during the late rebellion than California, her gold product being of vital importance in procuring munitions of war imperativly demanded, which could only be furnished by other nations. The great value of the gold deposits in addition to drawing emigration from all portions of the globe, also demonstrated the necessity of a trans-continental railroad, which is now on the eve of completion, and thereby will still further cement the integrity of our nation. Like the wand of the fabled magician, the gold product of California has stimulated prosperity almost everywhere in civilized countries, and promises in connection with her other mineral treasures, to change in time the monetary center of the world from Europe to America.

The deposits of gold in the various forms of ore are to be found in most all of the mountainous portions of the State, the Sierra Nevadas for their entire length, from Oregon to Arizona, being the principal sources of supply. The Coast Range of mountains near Santa Cruz, and the high land bordering on the Pacific near Trinidad, known as Gold Bluffs, also produce the precious metals in limited quantities, the latter deposit being one of the most remarkable known. The deposit is found in the sand of the sea beach, and being in very fine particles, the difficulties attending its collection are great, the heavy surf of the ocean beating on an unprotected shore, for a few hours, often sweeping away the miners' work of many weeks. In the Sierras a great variety of diggings, or deposits, are found, tasking the skill and ingenuity of the chemist, as well as the mechanic and miner, to extract the precious metal from the numerous and rebellious forms of ore. Experience, though sometimes costly, is also a good instructor, and in California, gold mining and milling has become a science that has overcome many obstacles not found in other countries. The earliest and simplest forms of gold mining having been exhausted, more permanent and valuable deposits have been worked, requiring the use of costly and improved machinery. The production of gold, though somewhat lessened during the last ten years, is more steady and to be relied on, and promises to continue, and increase probably for centuries to come. The total yield of the mines in California, from 1848 to the present time is estimated by to be fully $900,000,000, and is now averaging $24,000,000 per annum.

Silver ore of various forms and value, has been found in several sections of California, the most important deposits being on the eastern slope of the Sierra Nevadas. The principal mining so far done, has been in Alpine and Mono counties, bordering on the State of Nevada. The most important deposits of silver in the United States however, have been found in the latter State, those of the Comstock lead, at Virginia City, having been noted for their exceeding richness of ore, and large production. The whole State however seems to be rich in silver deposits, very extensive discoveries of ore having been made along the line of travel, from west to east from California to Utah Territory. Quite large settlements have been formed at Austin, and other adjacent points in the Reese River district, while during the present year 1868, the almost fabulously rich discoveries of silver ore in the White Pine district, nearer Utah Territory, promises to soon build up that section of country, with a population larger than all the rest of the State combined. The total production of silver in Nevada during the past six years, is estimated at $60,000,000, all of which has passed through California, San Francisco being the distributing point. The completion of the Pacific Railroad promises however, to soon divert in part the flow of treasure from the Pacific towards the Atlantic States via Chicago, but the great markets for silver in Asia, will doubtless be supplied through San Francisco, as heretofore.

Quicksilver or cinnabar was almost the earliest mineral known on the Pacific slope, and at the present time the mines of California produce more metal than all others in the world. One effect of the great production of the mines of this State has been the reduction in value of quicksilver in all the principal markets, the decreased price of the metal causing the abandonment of some hitherto noted mines of that mineral in Europe. On the other hand, the cheapness and great supply of quicksilver has stimulated gold and silver mining in many countries, where the previous high cost of the metal had prevented the successful working of low grade silver and gold ores. The principal quicksilver works are in Santa Clara and Monterey counties, the New Almaden mine, in the former being the most valuable of the kind known. Considerable deposits of the ore have been found in Lake county, one of the mines during the last four years having produced large quantities of metal. The total production of quicksilver in California from date of the discovery of the first mine in 1848, up to 1868, amounts to nearly 600,000 flasks, each containing seventy-six and a half pounds metal.

Copper in its various forms of ore has been found in quite large deposits in many portions of California. The principal deposits are in Calaveras county, the great bulk of the ore (sulphurets) exported coming from Copperopolis. The same form of ore has been found in Amador, El Dorado, Nevada, Sierra and Plumas counties, while other forms such as oxides and carbonates, have been found in more or less quantities in Colusa, Lake, Contra Costa, Marin, Mono, Mariposa, Fresno, Los Angeles counties, and virgin copper in Placer, Delnorte and Humboldt counties. The greatest drawback to successful copper mining in California hitherto, has been the cost of transportation to San Francisco, and shipping expenses to foreign countries of low grade ores, which form the bulk of the deposits in the State. The ores rarely assayed over 20 per cent copper on an average, so that the expenses on five tons mineral, to Europe or the Atlantic States, largely consumed the value of the one ton of commercially pure metal it produced after smelting. The low price of refined copper in all the markets of the world during the past two years, also greatly depressed mining in California, so that exports of ore were for a time entirely discontinued. Considerable knowledge in reducing sulphurets to a nearly pure metal, has however, been attained by our miners' who in some sections of the State where wood is plentiful, have produced copper averaging 92 to 96 per cent, pure metal from one smelting. The establishment or a complete set of rolling machinery, for manufacturing copper is promised by the Pacific Rolling Mills, in which case copper smelting works will probably be established at some point in San Francisco or the adjoining bays. The increasing business in shipbuilding on the coast, promises to open a large and profitable market for copper for fastening and sheathing, as will also be the case in many branches of domestic manufactures whose material is now all obtained from the East. The total value of copper ore shipped from California, during the three years preceding 1867, was over $5,500,000 the larger portion of the export going to Great Britain.

TIN.—Very large deposits of one form of this metal have been found at Temascal, Los Angeles county. These deposits are said to be extensive, and easily worked, and are the only ones known in the United States. The mines have not been worked for many years, owing to disputed titles to the lands. This obstacle has, however, been removed, and a company, with large capital, formed to work the mines. Samples of the ore have been brought to San Francisco during the past year, which turned out metal that compared favorably with the imported article.

LEAD.—Numerous deposits of lead ore have been found in various portions of California, the principal one being located on Santa Catalina island, off Santa Barbara county. The ores at this island were found in quite large masses, and easily accessible to shipping. Considerable quantities of ore were got out and shipped, but all mining was stopped by the occupation of the island by United States troops, during the late rebellion, and since then by adverse claimants to title who finally have obtained possession of the mines. Quite large deposits of galena have been found in the State of Nevada, and also in Arizona Territory considerable quantities of ores from both places having been shipped and smelted at the lead works in San Francisco.

IRON.—Many deposits of this valuable metal have been reported discovered in California, but as yet, with some exceptions of successful experiments on a small scale in Sierra county, no mining or smelting has been done. The only iron furnace which has yet produced good merchantable iron in commercial quantities on the Pacific coast, is located near Oregon City, on the Willamette river, Oregon. The ore is of excellent quality, and near to the river, on the banks of which the furnace is located. The capacity of the furnace is about eight tons pig metal per day, the total production during 1868 marketed in San Francisco, being about 1,200 tons. Wood and limestone are convenient to the mine, and in case the pig metal is found well suited for manufacturing by the Pacific Rolling Mills in San Francisco, it is very probable the production of the mine will be largely increased.

COAL.—Deposits of this almost indispensable mineral have been found in various portions of California; the only mines worked, however, being in the Mount Diablo district, in Contra Costra county. The coal from this section, although not of superior quality, from its cheapness, is used very extensively for steam purposes on steamboats on the inland waters of the State, and also for manufactories in San Francisco. Very large deposits of better, but not the best, qualities of bituminous coal have been found in Oregon, at Coos and Bellingham Bays—the latter being extensively used in California for domestic purposes.

BORAX.—The very extensive deposit of this mineral, found at Borax Lake, in Lake county, is said to be the largest in the known world. Very large quantities are furnished by the company who own this lake, both for local use and for export to the Atlantic States.

SULPHUR.—The principal mines of sulphur in California, are found in Lake and Colusa counties, the refined product of which now supplies both powder mills in California, to the exclusion of importations.

MANGANESE.—This valuable mineral is found in large quantities at Red Rock, an island in San Francisco bay, about ten miles from this city, and also in Sonoma county and at Islais creek, the latter a few miles from San Francisco. Quite large quantities of the ore have been shipped to the Atlantic States for manufacturing purposes, and in view of recent discoveries of the chemical value of the ore large increased shipments will probably be made.

GYPSUM.—Is found in large quantities in Santa Cruz and Los Angeles counties Graphite, or plumbago in Los Angeles, Mariposa, Tuolumne and Calaveras counties

Cobalt and nickel in Placer county. Fire clay in Contra Costa and kaoline, or porcelain clay, in Mendocino and Napa counties.

Very large ledges of cement stones are found in Solano county, near Benicia, the manufacture of the Benicia Cement Company, at that place, being about 12,000 barrels in 1868, in the face of strong competition with importations. The domestic-made cement, is steadily gaining in the estimation of the public, and will in time doubtless supply the entire demand. A large deposit of cement stones is reported to have been discovered on the Columbia river near Portland, Oregon, but so far no quantity of cement has been made.

ELECTRO SILICON.—A mineral substance much used for polishing metals, has been found in Nevada, and is largely used in California. Very extensive mines of this substance have been found in Sonoma county, California, which can be landed in San Francisco, ready for shipping at less cost than simple transportation charges from Nevada. It is believed that Electro Silicon can be used to good advantage in making the finer kinds of glass, and a trial was to be made of it for that purpose, when the San Francisco Glass Works, were burned down in June, 1868. Should this mineral prove as valuable as expected for glass making it will be of great benefit to California, from its cheapness and abundant quantity.

ASPHALTUM.—Is found in very large deposits in the eastern portion of the State. large quantities being brought from the sea coast, in Los Angeles and Santa Barbara counties, for various manufactures and uses in San Francisco and other cities.

PETROLEUM.—Is found in many portions of the State, the largest deposits known, being in Santa Barbara county. California petroleum is of greater specific gravity than that of Pennsylvania and other Atlantic States, and therefore, produces a much smaller percentage of illuminating oil. This cause combined with the low price of imported burning oils during the last two years, rendered the refining of California petroleum unprofitable, so the business has been discontinued. One peculiar feature of the deposits of petroleum in California, is the entire absence of flowing, or even pumping wells, the entire supply of petroleum being obtained by seepage in tunnels run into shale, or oil bearing rock, the strata of which is vertical, rather than horizontal as in the Atlantic States.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, 1868.

GENTLEMEN :—The undersigned Judges of Award on Minerals, etc., exhibited at the Mechanics' Fair, for 1868, beg leave to recommend to the Board of Managers of the Mechanics' Institute, that the following awards be made :

To the North Star Mining Company, for specimens of their vein stone : honorable mention. Awarded a Diploma.

To G. Kustel, for a very valuable collection of minerals, chiefly foreign. A Silver Medal, if the Board of Managers see fit to make such award to a collection which is chiefly foreign. Awarded a Silver Medal.

To M. Scott, for display of Copper, Gold and Silver ores from Alpine county : honorable mention. Awarded a Diploma.

To M. Lane, for specimens of silver ore ; honorable mention. Awarded a Certificate of Merit.

We would further say, that the Oregon Iron Works have presented specimens of hydrous per oxide of iron, or brown haematite which in view of the great importance of the manufacture of iron on this coast, we deem worthy of notice,although we have not been notified that they have been regularly entered at the fair. Awarded a Silver Medal.

Your Committee cannot but regret the apathy of those especially engaged in mining in this State, as shown by the very meagre exhibit of minerals at this Fair, compared with what might have been expected from the almost boundless resources of the State in this respect.

(Signed.)

MELVILLE ATWOOD,
L. M. KELLOGG,
O. W. EASTON.

CLASS XII.

CHEMISTRY AND CHEMICAL SUBSTANCES.

COMPRISING ALL CHEMICAL AND PHARMACEUTICAL MANUFACTURES AS ALKALIES; ACIDS AND ALL OTHER MANUFACTURES AND PROCESSES, PHARMACEUTICALSUBSTANCES AND PROCESSES OF PRODUCTION.

Considering the peculiar circumstances of the settlement of California, and the strong competition from imported chemicals, the progress already made in domestic manufacturing is creditable to the enterprise of our people. In the production of acids used in gold refining and assaying, our manufactures are of high degree of excellence and very extensive. Sulphuric, muriatic and nitric acids, have been manufactured in large quantities in San Francisco, during the last fifteen years, and at present the domestic-made article supplies the demand to the almost exclusion of importations. In the finer chemical and pharmaceutical preparations great progress has been made in manufacturing, two large chemical works producing most of the varieties used in the trade. The production of sulphate of copper is about four hundred tons per year, and being made from ores, the quality of the home manufacture in the average is better than importations. Sal soda of excellent quality is produced from imported soda ash and the refined California borax is considered equal to any in the market. Sulphur is also refined in large quantities and is used by our local powder works to the exclusion of Italian. California is extremely rich in deposits of many chemical substances, and appearances indicate that within the next decade, her production of manufactured chemicals will be in great variety, and so extensive in character as to give her high rank with other States of the Union. An increase in population and more extensive markets, combined with lessened expense of manufacturing all of which may be shortly expected will soon stimulate the production of chemicals into one of the most valuable of the minor industries of the State.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, 1868.

Gentlemen:—The Committee beg leave to report that they have examined the articles in class 12, and find that the first premium should be awarded to Messrs. Crane & Brigham, for the specimens of sulphate of copper of California manufacture. Awarded a Diploma.

The second they consider should be awarded to the articles exhibited by the Standard Soap Co., consisting of various products obtained in the manufacture of candles and soap. Awarded a Diploma.

The Bay View Chemical Works, exhibit some very perfect crystals of Sal Soda, obtained from imported soda ash. Awarded a Certificate of Merit.

(Signed.)
James Blake, M. D.
Thomas Price, by Jas. Blake.
B. F. Martin.

San Francisco, Sept. 12, 1868.

I concur in the above report with the exception that I think the first premium should be awarded to the Standard Soap Co., and the second, to Crane & Brigham.

(Signed.) Arch'd Cooper.

CLASS XIII.

JEWELRY, SILVER AND PLATED WARE.

COMPRISING MANUFACTURES OF PRECIOUS METALS AND IMITATIONS, DIAMONDS AND OTHER PRECIOUS STONES: LAPIDARY WORK, GOLD PENS, HAIR JEWELRY, PLATED WARE, AND GALVANO PLASTIC, INDIA RUBBER JEWELRY ANDITS IMITATIONS.

The large production of gold in connection with the liberal disposition and habits of miners, early caused the manufacture of jewelry in California. This was at first confined to the making of specimen pins and rings, but as the State became settled up, a more cultivated taste prevailed, and more artistic work was produced. At the present time our local manufactories turn out all styles of solid gold jewelry, and with exceptions of extremely high cost precious stones, all other styles needed are produced, and articles made, for beauty of workmanship, taste in setting and and materials used, not being surpassed elsewhere. All kinds of lapidary work are executed with excellent taste; one variety, gold bearing quartz jewelry, being a specialty confined to California. The manufacture of gold pens is prosecuted by three different firms, whose makes are in high repute. In hair jewelry our local manufacturers produce styles and varieties, that for taste and finished workmanship would be considered creditable to the trade in the oldest established firms.

In the manufacture of silver plate the workshops of San Francisco have attained high rank, the articles produced being of the purest quality of metal used for the purpose. and in design and skillful workmanship equal to any imported. The local manufactories enjoy unusual facilities for procuring metal, as the entire product of the silver mines of Nevada comes to San Francisco to be assayed and refined previous to shipment abroad. The production of silver plate is fast increasing, and promises to soon become quite prominent among the minor industries, as the tastes and desires of our people largely incline to its use.

Plated ware of all kinds and styles of manufacture, is largely produced in California. During the past year the manufacture of electro-plated ware has been successfully engaged in, and meets public favor. The domestic-made ware is remarkable for the elegance of the designs, the purity of plate and excellent finish. The field for this manufacture is a very large one, and rapidly increasing, the demand for which, it is believed, the enterprise of local manufacturers will in time supply. Many varieties of precious stones have been found in California in limited quantities, among which have been a few small diamonds, rubies, topazes, onyx, cornelians, and others used for jewelry purposes. It is believed by many well-informed persons that extensive deposits of precious stones will in time be discovered in the State and possibly become of export demand.

To the Managers of the Mechanics' Institute Fair, 1868.

GENTLEMEN:—The undersigned Judges of Award on articles entered in Class 13, submit the following report and recommendations.

That the Gold Medal be awarded to Vanderslice & Co., (No. 132) for their fine exhibit of California manufactured Silver Ware, which is not only a handsome and costly display including goods to the value of some $6,000, but is exceedingly creditable and interesting as a branch of home manufacture. Awarded a Gold Medal.

That a Silver Medal be awarded to Haynes & Lawton, of the Pacific Plate Works, for fine exhibit, of California Silver Plate Work. Awarded a Silver Medal.

That a Silver Medal be awarded to R. F. Rocchiccoli, (No. 195) for fine exhibit of Silver Plated and Gilded Goods. Awarded a Silver Medal.

That a Diploma be awarded to the San Francisco Plating Works, (No 235) for excellent exhibit of plated ware of California manufacture. Awarded a Diploma.

That a diploma be awarded to O. B. Oakley, (53) for specimens of Sliver Plating in the old method. Awarded a Diploma.

That a diploma be awarded to P. A. Giannini, (158) for three Gold Watch Cases made by him in this city, of excellent quality and finish. Awarded a Diploma.

That a diploma be awarded to John Martell, (No. 115) for exhibit of Silver Plated coach material. Awarded a Diploma.

That a diploma be awarded to C. E. Collins & Co. (No. 219), for one clock of California manufacture, which deserves particular notice for the excellent workmanship and elegance of design and finish. Awarded a Diploma.

That a diploma be awarded to H. Wenzel (No. 24), for a clock of California manufacture a specimen of the excellent articles in this line made for some time past by the same party and much in use here. Awarded a Diploma.

That a diploma be awarded to F. Hollander (No. 228), for a California invented watch alarm, which exhibits much ingenuity and may be quite useful. Awarded a Certificate of Merit.

That a diploma be awarded to Mrs. C. Cook (No. 170), for the largest and finest display of hair jewelry. Awarded a Diploma.

Also to Mrs. B. Uszynski, for a case of hair jewelry. Awarded a Certificate of Merit. Also to Mrs. Bolander, for exhibit of hair jewelry. Awarded a Certificate of Merit.

The following articles are worthy of special praise. Two cases of superior silver ware imported and exhibited by Braverman & Levy. Awarded a Certificate of Merit.

A Musical Clock, made by F. Heinze. Awarded a Diploma.

A Silver Shield and Hibernia-American coat-of-arms, made by Wm. Lynch. Awarded a Certificate of Merit.

Two cases Silver ware and Jewelry with Clock, exhibited by C. H. Hain & Co. Awarded a Certificate of Merit.

A Silver Speaking Trumpet, exhibited by T. H. Allen.

(Signed)

JOB M. SEAMANS.
OTTAVIANO GORI.
W. T. GARRATT.
B. P. AVERY.

CLASS XIV.

Lithography, Engraving, Printing, Book Binding, Paper and Types

COMPRISING THE ART OF LITHOGRAPHY AND MATERIALS USED, ALSO ENGRAVING, ORNAMENTAL AND OTHER PRINTING, BOOK BINDING IN ALL ITS BRANCHES, ORNAMENTAL BOXES AND WORKS MADE OF PAPIER MACHE, PRINTING MATERIALS AND PROCESSES USED IN PRINTING AND BINDING. PAPER OF ALL VARIETIES MADE. PENMANSHIP.

The field in this class is so extensive that the condition of the arts or trades can only be briefly sketched. In Lithography great progress has been made, the local establishments being extensive and producing all varieties of work required. All of the latest improvments in presses, materials and designs are used, the quality of the drawing and mechanical execution being unexceptional. Comparatively little Engraving is done the demand being limited in both extent and kind.

In Ornamental and other Printing our printing offices are equal to any of similar extent elsewhere, the work produced being of the best quality in both execution and design. The printing trade is in a most flourishing condition and increasing rapidly in importance. One very noticeable feature in the trade within the last two years has been the publishing of many fine literary works of local authors, which for excellence of paper, typography and binding would be called creditable to the largest establishments in the Atlantic States. In this department of the trade a permanent and healthy increase of production is expected and with more favorable circumstances in procuring materials it will not be long before California will possess a book publishing interest that will outrank in importance that of any State of equal population in the Union.

In Book Binding in most branches our local establishments are able to supply the demand. The quality of the binding done, is unexceptionable in the different classes of work and needs only the same relative cheapness of materials used to exclude many styles of importations that now supply the market. This drawback will undoubtedly in a short time be removed as the crude stock for manufacturing materials is abundant and the business promises to prove profitable to those who may engage in it.

Paper making in California is at present limited to two mills which confine their operations to making news-printing in limited quantity, wrapping papers and binders boards. The stock for paper making is to be had in abundance, large quantities of rags etc. being annually shipped to the Atlantic States besides supplying the mills demand. The quality of the different styles of paper made by our mills compares favorably with the same grades imported, but there is still a vast field to supply which would give profitable employment to local capital and labor. There is no valid reason why this state of things should continue as all circumstances are favorable to its removal. Over a million dollars is annually taken from California to pay to paper manufacturers in the Atlantic States and Europe the larger portion of which amount could be most profitably and easily retained at home. Capital is abundant but is timid of investment while labor needs a more varied field for its employment. The opening up of large markets in the interior by the speedy completion of the Pacific Railroad should stimulate many branches, of industry in California to a renewed vigor, and paper making will no doubt be largely benefited with the rest. The paper mills of the New England and Middle States supply the larger portion of the so-called Western States, and the markets of the interior of the continent all things considered can be furnished as cheaply from the Pacific Coast.

California possesses the only type foundries on the west coast of America, two establishments in San Francisco having gone into operation within the last two years. The type made by these establishments is of excellent quality and the local demand is largely in excess of the present capacity of the foundries to produce. As yet only the most common varieties of types are produced but it is expected to make all kinds the trade may demand in time.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, 1868,

GENTLEMEN:—The Committee on this Class beg leave to report as follows. We award to—

F. Seregni, of the Pacific Business College, first premium for ornamental penmanship and pen drawing. Awarded a Diploma.

California Business University, first premium for commercial penmanship. Awarded a Diploma.

L. M. Fernandez, second premium, for ornamental penmanship. Awarded a Certificate of Merit.

Miss. A. W. McClelland, creditable specimens of wood engraving. Awarded a Diploma,

J. B. Grouppe, a boy only 14 years of age, exhibits a specimen of wood engraving, which is excellent, and promises well for the future. Awarded a Certificate of Merit.

H. C, Bateman, exhibits a case of Catholic Bibles and Prayer Books, the bulk of which were bound in the East. The specimens bound here are not worthy of any special notice.

J. Breidenstein, exhibits a great variety of jewel and work boxes, highly creditable to the manufacturer. Awarded a Diploma.

Geo. B. Hitchcock & Co., have a few fine specimens of copying presses manufactured in this city which deserve a premium. No competition. Awarded a Diploma.

F. M. Trueworthy, first premium for some specimens of stencil cutting. Awarded a Diploma.

G. M. Wood, specimen of plain stencil cutting in common use.

A.Mussard exhibits some miserable specimens of engraving on glass.

J. P. Upton exhibits some very common specimens of card printing, unworthy of any special notice.

H. H. Bancroft & Co. exhibit a great collection of their own publications admirably printed and of great practical value to the State, a premium ought to be given to the publishing house, that has done so much to encourage domestic manufacture in their line of business, a silver medal, recommended. Awarded a Silver Medal. The same house exhibit their Occidental Black Fluid Ink, which the committee think is entitled to the first premium. Awarded a Diploma.

Cubery & Co. First premium for fine specimens of ornamental printing. Awarded a Diploma.

E. S. Colburn exhibit two specimens of pictures, executed with a pen.

Frank G. Edwards exhibits, some fine plain and ornamental wall paper, with some of the blocks of the plainer pattern, no competition. Awarded a Diploma.

A. Foreman, exhibits an improved Type Machine which is worthy of an especial notice and a premium. The improvement claimed is in the *eccentric movement* for working the pump, by which the metal is forced in to the mould, and by which can be cast *pearl* to three line pica, being a range of eighteen sizes. It claims to produce more solid metal, easier to work, producing less friction, and not so liable to get out of repair as other machines. Awarded a Silver Medal.

Wm. Faulkner & Son, exhibit a Type Casting machine.

Palmer, Knox & Co. exhibit a Printing Press and Inking machine, nothing new, Awarded a Diploma.

T. M, Cash, exhibits a fine Printing Press.

The Committee recommend the Babbitonian system of penmanship, and the admirable pens that are beautifully fine, flexible and non-corrosive. The ink manufactured by the same party is intended to be used in the system of penmanship.

J. E. Beck, exhibit some specimens of fair penmanship not peculiarly remarkable for their elegance.

S. P. Taylor of the Pioneer Paper Mill deserves a gold medal, not only on account of his enterprise, but for the splendid specimens of paper which he exhibits at the Fair. We find a great variety of colors and qualities suitable for wrapping, printing and all commercial purposes. Such an enterprise is a credit to the State and ought to be liberally encouraged by the trade. Awarded a gold medal.

Teubner & Hoffman exhibit a variety of Jewelry boxes, some of which are neatly executed. Certificate of Merit Awarded.

William B. Cooke & Co. exhibit an extensive variety of Blank books for all kinds of commercial purposes. They are not exhibited as fine specimens of workmanship, but to show what can be done in their line at home. The paper is ruled; the leather is tanned, and the binding is executed in the State, all of which is a credit to the parties concerned.—Awarded a Silver Medal.

Geo. B. Hitchcock & Co exhibit some splendid specimen of *Bankers' Wallets* and fancy pocket books, they are made of Russian and Morocco leather and are beautifully and substantially manufactured and deserve a premium. Awarded a Diploma.

Geo. B. Hitchcock & Co. second premium for elegant specimens of Blank book binding. The books were bound by Althoff & Bahls.

John G. Hodge & Co. first premium, The superb specimens of paper ruling and Blank book binding were executed by Buswell & Co. of this city. Awarded a Special Diploma.

EDWARD BOSQUI,
H. H. MOORE,
JAMES LINEN.
J. J. REY,
JACOB BACON.

CLASS XV.

Carriages and Wagons—Comprising all Manufactures of Carriages and Wagons Known.

For a country not producing beech, ash, oak, hickory or similar tough fibrous woods which are so largely used in the making of wheeled vehicles of all kinds, California has made great progress in that line of manufactures. At the present time to a very large extent importations of the medium and commoner varieties of both light and heavy wagons have ceased, our local manufacturers by useing imported materials almost supplying the demand.

The making of the finest varieties of carriages has also been extensively engaged in by our mechanics' some of whom have invented improvements in the mode of constructing and material used that have been much valued in the Atlantic States. It is almost too early to predict a speedy cessation of importations of wagons as the whole question turns upon procuring suitable woods at reasonable price somewhere contiguous to the shores o the Pacific. It has been reported at various times that suitable woods for this branch o manufactures can be had in considerable quantities at several points in Washington Territory and Alaska but so far no practical showing has been made to verify such statements

There are however long stretches of coast in both the sections named, literally unexplored and it is to be hoped that a search for woods will be successfully made hereafter. There is a very large market to supply with wagons, etc. easily accessible to our California mechanics and the field is rapidly enlarging by the settling up of the State and adjoining States and Territories. There is also a fair likelihood of an extensive export demand in time arising in foreign markets bordering on the Pacific all of which should if possible be supplied from our own shops to the exclusion of those in the Atlantic States.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, 1868.

GENTLEMEN:—The Committee on this Class, are of the opinion that the work on exhibition at No 273, in original design, style, finish and execution in all its details, entitle the manufacturers Messrs G. P. Kimball & Co, to the highest prize offered, a *Gold Medal*.—Awarded a Gold Medal.

We regard the work No 154 worthy of special mention, and as the next best work exhibited and entitling the exhibitor Mr. A. Folsom, to a Silver Medal or such other honorable distinction as you may award. Awarded a Silver Medal.

We are also pleased to make mention of a highly finished Butcher Cart, No. 374 made by Gallagher Bros, which in style, material, and finish does credit to the builders.—Awarded a Diploma.

(Signed)

H. M. NEWHALL,
J. W. FARREN,
H. M. BLACK,
H. W. BYINGTON.

CLASS XVI.

LEATHER AND LEATHER WORK.

The extent and monetary value of the annual product of our tanneries and leather manufactures is comparatively unknown to the great bulk of our people. For the production of leather the climate of California is peculiarly favorable from its genial regularity of temperature, while a species or variety of native oak is abundant and produces bark which for richness in tannin principle has no equal elsewhere. The consumption of animal food in the State is also largely in excess of that of any similar population in the Union, thereby insuring a large and constant supply of skins and hides for tanning far in excess of our local wants. As a consequence, large numbers of green, dry and salted hides are shipped from San Francisco to Atlantic ports, while considerable quantities of tanned leather in the aggregate also accompanies the raw product there. The peculiarities of climate and tan bark producing leather of excellent quality has, however, made a high reputation for the tanneries of California whose product for some uses is considered better than Eastern made. The only drawback so far in manufacturing leather has been a failure to make calf and other dressed skins into as good products as those of Philadelphia and other Atlantic cities. It is believed, however, that our local tanneries will in time produce good calf and dressed skins that will in large part take the place of present importations.

In harness and saddlery of all descriptions, with some few exceptions, the greater part of the consumption of the Pacific Coast is supplied by our own mechanics. This branch of manufacture is very extensive and increasing rapidly, owing to the general use of animals for personal comfort or convenience, and transportation of freight for long distances by wagons in the interior. Considerable exports of saddles and harness have also been made to foreign countries, Japan, in particular, having made most extensive purchases for Government purposes. The varieties of leather used in saddlery and harness are produced by our tanneries and also in Oregon of such excellent quality and comparative low price as to almost drive out Eastern makers from the markets.

In making boots and shoes of almost all kinds the shops of California are fast interfering with importations. The manufacture of boots and shoes in this State is already set down at about $1,200,000 per annum. The quality of the home-made goods is most favorable for the different grades of wear, and large offerings of desireable styles at auction have been taken by the trade at prices varying from 15 to 20 per cent over the same classes sold at the same time from Eastern cities. It seems probable that very few years will elapse before importations of boots and shoes to California will be numbered with the things of the past.

In other branches of leather manufactures, such as trunks, valises, etc., our mechanics supply the larger part of the local demand. Very large quantities of fire hose and leather belting are made by manufacturers in San Francisco, the former article being used to the entire exclusion of Eastern importations, the home made hose being considered much better than any other. The leather belting is preferred to Eastern-made by all persons who have used it and, the manufacture is in such good favor that it will in time probably monopolise the home markets.

CLASS 16—SECTION 1.

COMPRISING HARNESS AND SADDLERY.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, 1868.

GENTLEMEN :—Your Committee appointed to examine and report on Class 16, section 1, respectfully submit the following :

The display by Main & Winchester of goods in their line and of their own manufacture, is of the most superb kind and cannot be excelled. The attention of your Committee was especially directed to the harness consisting of double coach, double and single buggy and a double harness for a pair of Newfoundland dogs, equal in style and finish to most of the harness used on first class horses.

The Mexican, Ranger, and Jockey saddles together with an assortment of the various kinds of riding bridles most certainly excel every thing of the kind ever before placed on exhibition.

The display of whips is also very fine, the manufacture of which is a very important branch of their business, employing many hands and producing the very finest and best that are used in California, or, in fact, on the whole Pacific Coast.

To encumber your pages with an elaborate report on an exhibition of goods of such elegance, taste and beauty is simply superfluous, but your Committee cannot refrain from expressing a great degree of pride and satisfaction at the perfection attained in this class of manufactures in California, and respectfully recommend a first premium on harness, saddles, bridles, and whips.—Awarded a Gold Medal.

C. Vellenger, two Side-saddles, one velvet and the other hogskin ; both of which are beautiful and meritorious. First premium for side-saddle.—Awarded a Diploma.

M. M. Cook & Son. The display of the various styles and kinds of collars manufactured by them evince great skill, and that the quality of thetr productions are certainly very superior, we give the first premium for collars.—Awarded a Diploma.

F. T. Houghton, patent extension side-saddle, the utility of which may yet be demonstrated. The workmanship of the saddle is, however, only ordinary, but is a patent, and favoring the introduction of all and every new idea tending to promote and advance this branch of industry, your Committee make honorable mention.—Awarded a Diploma.

J. Hamilton, circus performing saddle, for the purpose, very good and durable, without doubt. Honorable mention.—Awarded a Certificate of Merit.

A. P. Beatty, San Jose, one silver Mexican bridle, head part solid silver, and very valuable. Honorable mention.—Awarded a Certificate of Merit.

(Signed)

W. H. BAXTER,
J. H. SWAIN,
J. B. DORR.

CLASS 16—SECTION 2.

Comprising Boots and Shoes and all Kinds of Domestic-made Leather.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, 1868.

GENTLEMEN :—Your Committee would most respectfully submit that they have examined the articles exhibited under the above head, and find them of very fine stock and superior workmanship. They recommend awards as follows :

W. F. Burke, for a fine display of ladies' boots, gaiters, and slippers, of superior workmanship. We recommend the first premium or Gold Medal. Awarded a Special Diploma.

L. Price. for the second best display of ladies' boots and shoes, the second premium or Silver Medal.—Awarded a Diploma.

Hobart, Wentworth & Co., for a fine assortment of men's heavy boots and shoes, a Diploma.—Awarded a Diploma.

Buckingham & Hecht, for the best miners' boots and brogans, a Diploma.—Awarded a Diploma.

S. Hoffman & Co., for superior calf and kip skins, a Diploma.—Awarded a Diploma.

We desire to make honorable mention of the fine exhibit by Tyler Curtis & Co., of California manufactured calfskins, kips, moroccos, and sole leather.—Awarded a Certificate of Merit.

(Signed)
J. C. JOHNSON,
THOMAS HAYES,
JAMES B. ROBERTS.

CLASS 16—SECTION 3.

Comprising Fire Hose, Belting, Trunks, Valises, Carpet Bags, Leather Buckets and Fire Caps.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute.

GENTLEMEN :—The majority of the Committee appointed by your body to make awards and report the same, submit the following, viz., for Class 16, section 3.

To M. M. Cook & Son, we award the first premium for Belting and Horse Collars. —Awarded a Diploma.

To J. J. Fulton, first premium for Fire Hose.—Awarded a Diploma.

To E. Galpin & Co., first premium for Leather Bags and Satchels, and favorable notice for Sole Leather Trunks.—Awarded a Diploma.

To J. Pointer & Co., first premium for Sole Leather Trunks, Sole Leather Saratoga Trunk, and Sole Leather Valises.—Awarded a Diploma.

Heuston, Hastings & Co., exhibited a fine assortment of Sole Leather Trunks, Sole Leather Valises, Leather Bags, Sacks and Satchels, but as these are not of California manufacture, the subscribers do not think they come in competition with work manufactured in this State.

Respectfully submitted,

F. E. R. WHITNEY,
WM. SHERMAN.

CLASS XVII.

SIGN, HOUSE AND CARRIAGE PAINTING.

COMPRISING SIGN, WOOD, GLASS, AND HOUSE PAINTING, GRAINING IN IMITATION OF WOOD AND MARBLE, STAINING AND WOOD POLISHING, BLOCK LETTERS AND ENGRAVED SIGNS ON METAL.

The display in this Class of the Exhibition, though of limited extent, was of general good quality. The trade in all its varied branches was well represented by California workmen, whose skill and taste is most creditable to so young a community. In graining and staining woods, in particular, the handiwork of our artists has been most successful, many of the imitations being so remarkable for delicacy and truthfulness of color as even with close inspection to deceive all but the very best judges. One of the native woods, California laurel, is capable of taking a most beautiful polish, its fine grain when properly worked being preferred by many persons to rosewood, black walnut, or other higher cost imported woods for cabinet purposes. The laurel also admits of staining, and in skillful hands has been made a most perfect imitation of the woods named and of the finest qualities known. Like many other of our native products, the parties who have introduced the laurel to public notice have had great obstacles to overcome in removing prejudices so as to have a fair comparison of its merits with imported woods. The capabilities of the wood have now, however, been successfully demonstrated so as to convince all but the most narrow-minded persons of its great value.

To the Managers of the Sixth Industrial Fair of the Mechanics' Institute, 1868.

GENTLEMEN :—The undersigned, Judges of Award in Class 17, recommend as follows :

F. Horst & Visby, a Diploma for Decorative Painting.—Awarded a Diploma.

J. W. Cherry, for Sign Painting, a Diploma.—Awarded a Diploma.

Wm. Patterson, for Metallic Sign, honorable mention.—Awarded a Certificate of Merit.

Geo. A. Brush, Sample of Grained Wood, a Silver Medal.—Awarded a Silver Medal.

John S. Boyd, Diploma for Wood Polishing.—Awarded a Diploma.

P. Gibot, honorable mention for Block Lettering.—Awarded a Certificate of Merit.

(Signed)
HENRY KENITZER,
FRE'K MANSELL,
L. M. KELLOGG.

CLASS XVIII.

Fnrniture, Billiard Tables, Desks and Show Cases, and Upholstery, Including Plain and Ornamental Furniture, Inlaid Work, School Furniture and Desks and Show Cases, Billiard Balls, and all work for Amusements.

In California the manufacture of furniture of all descriptions has become quite extensive, considering the fact that the largest portion of the materials used have to be imported. The greatest drawback to this branch of local industry is the scarcity of native woods suitable for manufacturing, there being only two varieties known which are applicable to the purpose. These woods—California laurel and Oregon maple—both possess many points of merit, the former in particular being considered superior to any cabinet woods found in the United States, black walnut probably excepted. The laurel in some respects may be termed the finest variety known from its adaptability to receive coloring or staining matter which, in connection with its light color, fineness of grain, and capacity for polish, enables our manufacturers to produce perfect *fac-similies* of all kinds of hard woods used in furniture making.

The entire demand of the Pacific coast for billiard tables is supplied from our local manufactories, the two principal ones, which are located in San Francisco, almost monopolizing the market: The tables furnished by these firms for beauty of finish, excellence of workmanship and materials used are unsurpassed by others made elsewhere.

The total number of men engaged in manufacturing furniture, billiard tables and other articles in this class in San Francisco is about eight hundred, the work produced by them in 1868 being valued at about $3,000,000. The settling up of the States of Nevada and Utah, Montana and Idaho Territories by the completion of the transcontinental railroad promises to increase this amount very largely for several years to come. In addition the importation of fine cabinet woods from Mexico, Central America, and the islands of the Pacific, which is now in its infancy, also promises to cut off still more largely the present importations of furniture from the Atlantic States. If the displays of furniture from our local manufacturers in the Industrial Exhibition of 1868 can be taken as a criterion of their ability and skill, the people of California have no further need of importations either for beauty of design, finish, nor quality of materials used.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, 1868.

GENTLEMEN :—The undersigned, Committee appointed to inspect and pass upon the merits of articles exhibited in Class 18, report as follows :

School Furniture exhibited by Wigmore & Palmer. We award to Wigmore & Palmer for the best School Furniture, Teacher's Desks, Tables, etc., etc., exhibited, in material, style, workmanship, and finish, the first premium for the kind of work. Awarded a Diploma.

Pompeian Desk, same exhibitors. This elegant piece of cabinet work, beautiful in design, and elaborate in finish, we agree to accord the merit of its being the finest piece of mechanism in wood on exhibition. And for this and the display of Wigmore & Palmer, we award the Gold Medal for Class 18, as being the most valuable display of California products, manufacture, and industry in our department.—Awarded a Gold Medal.

California-made Furniture, N. P. Cole & Co. This fine display comprises setts, Parlor, Chamber and Dining-room Furniture, made from native California wood, in laurel, rosewood and black walnut, and the furniture reflects credit not alone on the exhibitors but on our California artists employed by Cole & Co., who made the goods, and shows us we have the material in our State for fine furniture without going away from home. We award to Messrs. N. P. Cole & Co., a Silver Medal for their display of furniture.—Awarded a Silver Medal and a Diploma for fine Chamber set in Laurel wood.

The varied and elegant display by Messrs. Goodwin & Co., of rich goods, bridal parlor sets, dining-room furniture, chamber sets, Turkish lolling chair, ottomans, etc., etc., all on exhibition, a portion of which was exclusively made in their factory. in the upholstery, design, finish and execution we regard as the best on exhibition, and we award to Goodwin & Co., a Silver Medal for their display, and a special Diploma for the elegant and elaborately finished California Turkish lolling chair. —Awarded a Silver Medal and Special Diploma.

Jones & Wool, the first premium for gilt and gilt walnut frames.—Awarded a Diploma.

Whittier & Fuller, the first premium for their display of extra large French plate glass mirrors made in this city.—Awarded a Silver Medal.

Carpets, Rugs, etc., McElwee & Ackerman. Of this fine display we make honorable mention. For elegant patterns, taste and style, the finest on exhibition.—Awarded a Certificate of Merit.

Patent folding and spring bed, by Philip Hinkle. This bed has the advantages of a cheap bed and a good one, easily to be put up and as easy to be laid away. Of it we make honorable mention. Awarded a Certificate of Merit.

NOTE.—The Chairman was informed it was for some cause not in competition with other beds. Of this we have no date.

Laurel wood writing desk, exhibited by C. Newbegia. For this elaborate and highly finished writing desk we award a Diploma, it being regarded by the Committee as one of the best pieces of work in wood in all its details on exhibition.—Awarded a Diploma

Wire springs, made in California, by C. D. Hinckley, we deem worthy of special mention as made here.—Awarded a Diploma.

J. D. Patrick, California made patent bowling alley. This novel invention we regard worthy of special mention, and we recommend that the inventor be honored with such notice as you may award.—Awarded a Certificate of Merit.

S. C Bradshaw exhibits Peyson's gymnastic swing. We have no date to know if this is a California invention. We are of the opinion that it is worthy of a Diploma, or such special mention as you may elect.

Kinzer & Slocum. American spring bed. We regard this a good spring bed; it has merits as a slat spring, and of it we make honorable mention,—Awarded a Certificate of Merit.

W. L. Torry's spring mattrass. is a new, cheap, desirable and economical arrangement for a spring bed, easily repaired when out of order, and it is our opinion the California invention of W. L. Torry entitles him to the first premium in that line of goods.—Awarded a Special Diploma.

G. W. Sharp, bottle of Native Pulu. We are glad to note this new article of California growth, but the parcel is so small and in the absence of details we can only say we must know more to express an intelligent opinion.

Eureka Hair . This article, California soap root, we deem worthy special mention, it being a product of our own soil and will without doubt come largely into use for the purpose claimed for it. It being comparatively new, not having been thoroughly introduced, the Committee are not able to judge of its merits as they could wish Wo deem it a rival of Pulu, moss and hair, and believe when its merits are known it will come largely into use, and we recommend such special mention as you may award.—Awarded a Diploma.

Pacific Elastic Sponge Co. Of this new article of sponge we have seen samples loose and compressed, as well as mattrasses, pillows, etc., made, and we are of the opinion it has merit, and of it we make honorable mention.—Awarded a Certificate of Merit.

Billiard Tables. We award to E. Leisenfield, for the best billiard table exhibited, California made, available for all purposes and in the patern specially valuable for private houses, club rooms, etc., etc.—Awarded a Silver Medal.

Johnson & Best, rosewood secretary and bookcase. Of this elegant affair we make special mention Novel in its pattern and finished beautifully.—Awarded a Certificate of Merit.

L. Castaganio exhibits California-made inlaid furniture which reflects credit It is not alone one piece but a suit for a room, complete. Of it we make honorable mention.—Awarded a Certificate of Merit.

S. Tonner exhibits Rustic Chairs made from natural wood, new in design, and just the thing for our rural districts. Of his showing we make special mention.—Awarded a Certificate of Merit.

Wm. A Byrnes exhibits a fine base ball and cricket bat, well made, and correct, as we are informed, for the purpose intended. We make of this work honorable mention.—Awarded a Certificate of Merit.

Polished laurel and plain wood, by John D. Boyd. The display in this line we regard worthy of special mention. The various styles of work, polished and plain, are of superior quality and we recommend such favorable award as you may dictate.

Inlaid Floor, G. Rolland. This new and beautiful work entitles the exhibitor in our judgment to a diploma, His work being first in that line and the introducing of this kind of work would add another to our list of industrial enterprises.—Awarded a Certificate of Merit.

(Signed) CHAS. M. PLUM.
JAS. EASTON,
H. J. M. TROUTT,
A. CONRAD,
J. O. ELDRIDGE.

CLASS XIX.

STONE CUTTING AND MARBLE WORK.

COMPRISING ALL CLASSES OF WORK PRODUCED FROM NATURAL AND IMITATION STONE, MARBLE, PLAIN AND ORNAMENTAL WORK; EMERY, POLISHING POWDERS, ETC.—SCULPTURE IN STONE AND PLASTER OF WORKS OF ART, AND ORNAMENTS IN STONE OR PLASTER OF PARIS CASTINGS.

This branch of home industry though as yet in its infancy promises to soon be extensive enough to supply the entire demand of the people of this coast. Up to a comparatively recent period manufactures of marble were confined to the simpler branches of the trade the greater portion if not all of the finer ornamental work being imported from the workshops of the Atlantic States, France and Italy. A revolution in the trade has however taken place within the last five years, mainly caused by the discovery of ledges of excellent marble of various kinds in California, which, in turn, induced the erection of a steam marble works for sawing and polishing, so as to largely cheapen the the cost of production. At the present time block marble in the rough is imported from the Atlantic ports and Italy and with the varieties found in this State is made into all kinds of work needed, some of the mantels and monuments being ornamented in the highest style of art and comparing favorably with the finest imported. The marble ledges of California are mostly found in the interior far removed from railroads or water transportation so the rates of teaming makes rough marble of very high cost. This drawback as well as competition with similar varieties imported will in a few years doubtless be remedied, as the settling up of the country by a producing population will cause the construction of many lines of branch railroads to the vicinity of many of the ledges, and the increased demand will admit of greater economy in getting out the rough stone when quarrying.

In sculpture in stone the field of manufacture is yet very limited as the finer varieties of marble used for the purpose have to be imported. It is believed that ledges of the finest varieties of stone suitable for the purpose exist in California, and that discoveries will be soon made that will need only cheaper capital and time to develope. At present the principal marble ledges worked in the State are as follows, black veined, marble near Colfax, a fine clouded vein stone at Indian Diggings and a medium quality of white marble of unusual hardness at Marble Valley in Amador county. Considerable quantities of block marble have been brought from all of these places and manufactured, the principal works being in San Francisco and Sacramento city. In several places in the State discoveries have been made of ledges of alabaster but so far no stone of commercial value has been quarried.

CLASS 19—SECTION 1.

COMPRISING ALL CLASSES OF WORK PRODUCED FROM NATURAL AND IMITATION STONE MARBLE, PLAIN AND ORNAMENTAL WORK, EMERY, POLISHING POWDERS ETC.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, 1868.

Your Committee have examined articles on exhibition in the above class and find as follows viz:

One marble mantel by Michael Heverin. of California workmanship and material which we consider entitled to a Diploma. Awarded a Diplomas.

The marble yielding the material of which this article is made is a very valuable addition to our building and decorative resources. It is colored, and of a brownish cast, mottled and variegated and susceptible of a high polish; which quality renders it valuable for dinning rooms, corridors, halls or billiard rooms, and other embellishments requiring a fancy material. It will harmonize with almost, every other crystaline rock polished especially with Sienna white, black or Egyptian marbles, porphyry or granite. It somewhat resembles antique Egyptian porphyry in color, Vermont furnishes most of the so called white Italian marble used here and the Pyrenees most of the ordinary colored marbles, of this market, Columbia, Amador, Suisun and especially the valuable marbles herein exhibited will relieve our list of importations to a considerable extent and in time find California more self-dependent for her fine marble.

Mr. Heverin's material is of genuine merit, and is we understand abundant. The rock is of metamorphic origin but not a primary.

A grindstone is exhibited by J. P. Robinson of Alameda County.

The stone is of altered cretaceious formation, is of fine grain, even gray color and texture free from quartz veins or other defects, and is the best freestone yet found in California for the purpose to which it is at present applied. In grit it is of good quality. This grindstone is evenly and truly balanced and very well wrought and fully equal in every particular to the best imported stones used for similar purposes to which this is applicable.

Mr Robinson is fully entitled to a diploma. As a building stone it is second to none on the coast, This we practically endorse. Awarded a diploma.

California artificial stone exhibited by E. T. Steen. This stone being the subject of a patent renders any comments upon its manufacture further than to refer to the printed description of the agents unnecessary.

The merit of this material cannot be gainsayed. Intrinsically it is admirable. As an effort of the scientific ingenuity of its inventor, it is also admirable.

We think that the day is not distant in California when it will be very extensively used· in forming the artificial stone the materials are put into a mould bearing any device chosen, No pressure is used other than to knead it into all the shapes desired.

A silicate of lime in solution is poured upon it for a few minutes. It becomes an indurated mass under the operation and ready for use in the building. Any color can be given to it and no one can be positive the material produced is not stone for it is unquestionable that the same process has been performed in Nature with precisely the same materials to produce that class of our freestone quarries whose integral cement like this is a silicate of lime whether the condensing precipitate has been the same or otherwise. We especially recommend to this material, in view of its being patented, an honorable mention, and strong endorsement of its qualities, and furthermore congratulate the State of California, that although the objects in this department, or class, are few in number, that they are all and individually extremely valuable. Awarded a Certificate of Merit.

(Signed) WM. PATTON,
F. WILLIAMS,

CLASS 19—SECTION 2.

Works of Arts and Ornaments in Stone or Plaster of Paris.

To the Board of Managers of the Mechanics' Fair, 1868.

GENTLEMEN:—In marble we find Messrs. Petanghi and Devine having each a pretty little piece, That by Mr Devine an expressive and finely finished head, your committee deem worthy of a Silver Medal. Awarded a Silver Medal.

In plaster models Mr. Mezarra is not approached. The life size relief of gentlemen and ladies' in connection with their other merits are very excellent likenesses and the yet unfinished model of the "Soldier Artist" is a very pretty conception.

In Cameos Mr. Mezarra maintains his well established reputation, The work on exhibition being very beautiful, your committee deem it worthy a medal.—Awarded a Diploma for Plaster Reliefs and Busts.—Awarded a Silver Medal for Cameos.

Samuel Kellett makes a very good display of Plaster Ornaments for interior decorations good in its kind but possessing no special merits that your committee could detect.

(Signed) JOSEPH BRITTON
Chairman Committee.

CLASS XX.

OILS, SOAPS, AND CANDLES.

COMPRISING OIL, SOAP, AND CANDLES, AND SUBSTANCES FROM WHICH THESE ARTICLES ARE MADE ; WHALE, LARD, SPERM. AND OTHER ANIMAL OR FAT OILS ; LINSEED, OLIVE, MUSTARD, CASTOR, AND OTHER DRY OR VEGETABLE OILS ; TURPENTINE, PITCH, TAR, ROSIN, CANDLES, SOAP, COMMON AND TOILET, PETROLEUM OILS, PAINTS AND COLORS.

The manufactures in this class in California are very extensive, valuable and creditable to so young a State. Linseed oil of the best quality is made by the San Francisco Oil and Lead Works in this city, mostly from imported seed. The capacity of these works is sufficient to supply the entire demand of the Pacific coast and interior for many years to come, the only drawback being the present inability of the manufacturers to procure a sufficient supply of seed of domestic growth. This difficulty is rapidly diminishing, however, as large amounts of seed are being raised each succeeding year, and the manufacture of flax grain and wool sacking being inaugurated offers additional inducements for farmers to cultivate the plant. It is within the bounds of reasonable probability to expect that within five years from date that the supply of domestic grown flax seed will be abundant enough to do away with importations both of seed and oil, the latter being quite extensive at this time. The same oil works manufacture in limited quantities castor and olive oil, the production of both and especially the farmer now rapidly increasing. Mustard or salad oil is manufactured in limited quantity by our local mustard and spice mills. Whale and other fish oils are refined in San Francisco, the total product in this branch of business being about two thousand barrels yearly. Lard oil to a considerable extent has been produced by our local refiners.

Considerable refining of petroleum or kerosene was at one time done in San Francisco, the two refineries having a capacity to turn out oil sufficient to supply about half the local demand. The crude petroleum of California is, however, of very great specific gravity, producing but a small percentage of illuminating oil in comparison with the product of the Eastern States. This difficulty in connection with the high price of sulphuric and other acids necessary for refining, and the immense importations of kerosene from the Atlantic States, sold at extremely low price, about two years since caused the suspension of local refining, which condition has continued to this date.

The cutting off of supplies of turpentine during the late rebellion caused the production of that almost indispensable article from a species of pine which is very abundant in some portions of the western slope of the Sieraa Nevadas. The product up to the time of opening up trade with ports in the Southern States, was of considerable proportions, and promised to prove a valuable item in the natural wealth and resources of California. Since that time, however, the price of turpentine, rosin and other naval stores, has largely diminished, and the production of those articles has decreased accordingly. At the present time probably one fourth of the domestic demand for turpentine is supplied from our own forests, and possibly two thirds that of rosin from the same sources. The pine trees of California have never produced good merchantable tar or pitch, but both these articles of excellent quality have been made in limited quantities in some portions of Oregon and been brought to this port, for sale meeting with good favor.

At the present time our local manufactories supply the entire demand for all varieties of plain and common soaps. The domestic made articles have a very high reputation for excellence of quality and are produced at such low prices as prevent importations from the Atlantic States proving profitable to shippers. It will probably not be long before the manufacture of toilet and fancy soaps will also be engaged in, as the market for sale of them and cheapness of material offer great inducements for the investment of capital in their production.

The immense consumption of candles in mining and other employments has always caused a large drain of treasure from the State to pay for importations Attempts have been made at various times for the past ten years to manufacture this arricle, but until recently they were attended with but slight degree of success. The domestic manufacture did not prove of as good quality as our people required, and importations from the Atlantic States supplied the market to the exclusion of the local product. Within the last two years several manufactories have, however, been successful in producing candles of a quality that compared favorably with the best standard brands imported, and have brought fully as good price when brought into competition with them. The principal drawback our local manufacturers have so far experienced has been their inability at times to procure sufficient supplies of tallow to enable them to meet the demand for their makes. This difficulty will, however, become gradually removed in time as cocoanut oil and other suitable substances can be imported profitably to supply deficiencies that now exist.

The manufacture of paints and colors is as yet confined to the production of a few articles made from mineral deposits found in several portions of the State. There is ample encouragement for the establishment of a large manufactory of white and other lead paints, and also for a manufactory of moderate extent for the production of chromes and other colors both dry and in oil. The consumption of these articles in California and the adjoining States and Territories is already immense and rapidly increasing, while at the same time there is an abundance of suitable substances for successful manufacturing which are now running to waste.

To the Board of Managers of the Mechanics' Fair, 1868.

Gentlemen :—We, the undersigned, Judges of Award on Oils, Soaps, Candles, and substances from which these articles are made, find as follows :

Paint Oil, raw and boiled, manufactured by the Pacific Oil and Lead Works, and articles from which they are made, stand ahead of anything on our list, rating A No. 1 and in our opinion are a credit to our city and State, to which we award the first premium, a Gold Medal, and we cheerfully recommend it for the further award of the Institute Medal.—Awarded a Gold Medal.

O. A. Olmstead, Mineral Paints, from Sonoma county, are also a credit to the State, to which we award a Diploma with recommendation to the further award of a Silver Medal as a substitute. providing two Silver Medals are allowed Class 20.—Awarded a Silver Medal.

Epes & E. H. R. Ellery, Patent India Rubber Paint from representation and general appearance we make favorable mention.—Awarded a Diploma.

From J. B. Parsons & Co., Bowman's Washing Fluid is in our opinion a splendid article, fully entitled to favorable mention.—Awarded a Certificate of Merit

Santa Cruz Manufacturing Co. (Whittier, Fuller & Co., Agents), Neats Foot Oil and Glue, we award a Diploma.—Awarded a Diploma.

San Francisco Candle Co., California-made Adamantine Candles, are in our opinion a splendid article, fully deserving of, and to which we award a Diploma.—Awarded a Silver Medal.

Standard Soap Co., make a fine display of family and fancy soaps, which reflects credit on the proprietors both for quality and neatness of style, to which we award a Silver Medal.—Awarded a Silver Medal.

H. Lakes & Co., Polishing Boot and Shoe Blacking, a good article.—Awarded a Diploma.

Their Mustard Salad Oil is a good article also, and of which we make favorable mention.—Awarded a Certificate of Merit.

J. Herkimer, Water-proof Oil-paste Blacking for leather, we award a Diploma. —Awarded a Diploma.

Eureka Soap Co., make a good article of soap, of which we make favorable mention.—Awarded a Certificate of Merit.

C. G. Kelly & Co., Washing Fluid, we think a splendid article, fully worthy of and to which we award a Diploma.—Awarded a Diploma.

We have also examined their Blueing, and it is in our opinion a first quality article We also award to it a Diploma.—Awarded a Diploma.

John J. Hucks, Axle Grease, we award a Diploma.—Awarded a Diploma.

Hill & Terreynes, Copper Paint. From the statement of Mr. Hill of the above named firm, and written testimonials of Mr. R. L. Ogden, Griffith of the steam tug *Rescue*, and several others who claim to have tested the quality of said paint, we are inclined to the opinion they are the best now in use and therefore recommend a Diploma.—Awarded a Diploma.

G. Louis, Olive Oil we award a Diploma.—Awarded a Diploma.

(Signed)

Wm. B. Swain, Chairman,
R. H. McDonald,
James R. Deane,
Chas. Langley,
Wm. R. Cranna.

CLASS XXI.

Painting and Drawing in Oil and Water Colors, Including Landscape, Portrait and Marine Painting.

PHOTOGRAPHY:—PHOTOGRAPHIC VIEWS AND APPARATUS; PHOTOGRAPHIC MATERIALS AND PROCESSES OF IMPROVEMENTS: ALL KINDS OF PLAIN, RETOUCHED AND COLORED PHOTOGRAPHS, ETC.

Probably no portion of the United States presents a greater variety of natura scenery, grand, impressive or touching to the eye of an artist, than California, Oregon, and Washington Territory. The range of subjects offered for illustration by the pencil of the painter therein, is comparatively exhaustless, and the phases of color and shading in many particulars is peculiar to the Pacific coast alone. It is therefore not astonishing that thinly populated as she is, that California has produced a school of artists whose fidelity to nature has caused their pictures to attract attention and generally favorable commendation wherever exhibited. Considering the many allurements offered in other branches of science, art or trade, the difficulties in obtaining convenient transportation or accommodations in many parts of the Pacific coast, and at times the comparative poor pecuniary returns for their talent thus employed, the artists of California are worthy of all praise for their public spirit and devotion to the practice of their profession. The time is not far distant when the people of the States east of the Rocky mountains will, by the aid of the now nearly completed trans-continental railroad, visit our coast by tens of thousands annually, and profitably employ our artists to furnish them with views and illustrations of scenery, the beauties of which they cannot find elsewhere, and otherwise only carry with them in their memory.

It is not boasting or exaggeration to here claim that when the natural beauty of her scenery is generally made known, with the wondrous fertility of her soil and matchless climate, that California will prove a successful rival in drawing thitherward a large portion of the many thousands of pleasure seekers who now annually voyage to Europe to visit localities in Switzerland and Southern Europe. That this annual influx of visitors of taste, wealth and fashion will stimulate the ambition and genius of our artists by causing a ready and profitable sale for meritorious paintings of Pacific coast scenery will not be denied, and we may therefor reasonably look for improvement in landscape and other painting, the natural result of patient assiduity of purpose and faithful drawing and coloring

In the art of photography California has attained high rank, those engaged in the business as a rule being among the most skillful in the profession. The peculiar clearness of the atmosphere during the larger part of the year, with the absence of radical changes in temperature, enables operators to produce pictures which for perfectness of outline, delicacy and faithfulness of representation have no superiors elsewhere. The same advantages of natural scenery over those of other sections of the Union affords a fine field for delineation at the hands of our artists which has been well improved.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, 1868.

The Committee to whom was referred the examination of Drawings and Paintings on exhibition at the Mechanics' Institute Fair, beg leave to report that they do not find in the exhibition such a display of works of art as the present condition of the fine arts in California would lead them to expect. The exhibition of pictures is most creditable to the artists of San Francisco, and the Committee have been embarrassed in an endeavor to determine to whom the palm of real excellence belongs in a collection of paintings in which there is so much that is beneath criticism, and so little that deserves honorable mention. The Committee would beg leave to preface their report with the remark that while there are a few pictures of great merit in the Exhibition, the awards recommended hereunto cannot be taken as any recognition of any superior excellence in the collection which the Committee have had the honor to examine.

Your Committee regret that the managers of the Exhibition had not offered a Gold Medal for competition in the fine art department as in others, believing that this apparent indifference toward the department may have had something to do with the failure of the artists of San Francisco to exhibit their best works in the gallery provided for them by the managers.

In the department which your Committee have the honor to report upon there is allowed one Silver Medal. Of the pictures entered for competition, none are pre-eminently qualified as entitled to the Medal for the "best painting" though there are several pictures that the Committee deem worthy of nomination as the best in their respective branches of art. In default of any painting of superior excellence entered for competition being found in the Exhibition, the Committee would respectfully recommend that the Medal at their disposal be given to the painting by Toby Rosenthal ("Affection's Last Offering") an artist of San Francisco, now residing in Munich. This picture we understand arrived here too late to be entered for competition.

The other awards at the disposal of the Committee are as follows:

For the best landscape in oil, a Diploma to William Marple. "Cascade Lake."—Awarded a Diploma.

For the best portrait in oil, a Diploma to Geo. B. Butler.—Awarded a Diploma.

For the best portrait in water colors, a Diploma to Geo. H. Burgess.—Awarded a Diploma.

For the best animal or figure painting, a Diploma to Chas. C. Nahl. "The Surprise."—Awarded a Diploma.

For the best decorative and fresco painting, a Diploma to Otto Schrader.—Awarded a Diploma.

For the best still life painting, S. M. Brooks, "A String of Fish," a Diploma.—Awarded a Diploma.

For the best pencil drawing, a Diploma to J. Reynault. "Horses fighting."—Awarded a Diploma.

(Signed)

Noah Brooks,
F. B. Harte,
Benj. P. Avery,
Chas. Russell Clark.

To the Board of Managers of the Mechanics' Fair, 1868.

Gentlemen:—We, the Committee appointed to examine the articles exhibited in Class 21, and to report upon the comparative excellence thereof, do report as follows:

Best collection of photographic views. H. E. Watkins.—Awarded a Silver Medal.

Best plain photograph. Silas Selleck.—Awarded a Silver Medal.

Best collection of colored photographs and retouched photographs. H. A. Vaughan.—Awarded a Silver Medal.

We also desire to report that we have examined with great care and interest the invention exhibited by T. E. Mills, known as the photoscope, and we find it to be one of great merit and novelty, being a very ingenious application of certain laws of optics to the production of photography, and that in our opinion does credit to the genius of California suggesting that it receive a Gold Medal —Awarded a Silver Medal.

(Signed)

J. B. Wanderford,
Jno. R. Jarboe,
T. A. Barry,
J. J. Rey, Chairman.

CLASS XXII.

Musical Instruments—Including all Instruments made of Metal, Wood or other Materials.

The manufacture of musical instruments was early introduced into California, piano fortes having been made in San Francisco by Mr. Jacob Zech, the pioneer maker, in 1857. The same party has now the principal manufactory and produces instruments which, for beauty of finish, excellence of material used and purity and strengh of tone are claimed to be superior to any now imported. The excellence of the pianos made by this firm is well attested by the fact the same styles, size and action sell readily and at generally higher rates than any other maker's imported. The demand for pianos on the Pacific coast is already very large and rapidly increasing and their manufacture promises to be large and profitable.

Organ making has been successfully carried on in San Francisco during the past ten years by one firm who have supplied several very excellent instruments of high cost to some of the principal churches in the State.

Quite a number of the minor varieties of musical instruments such as, flutes, aboes, flageolet, guitars, accordeons, etc. have been made in San Francisco for the last eight years.

As a rule these instruments have compared favorably with the best makers, imported. The manufacture is however not very extensive, as these instruments can be imported at much less cost than they can be made in California.

GENTLEMEN :—Your committee to whom was referred the examination of class 22 of California manufacture, beg to report as follows.

Gold Medal to Jacob Zech for best upright Piano.—Awarded a Gold Medal.

Silver Medal to G. Rudolph for second best upright Piano.—Awarded a Silver Medal.

Diploma to Jacob Zech for square Piano.—Awarded a Diploma.

(Signed)

R. HEROLD,
GEO. T. EVANS,
G. W. PETTINOS,
THEO. E. SMITH,

The Committee of Award of Board of Managers make the following awards on Musical Instruments, which seem to have been overlooked by the Committee of Judges on Pianos.

C. C. Keene for California made Musical Instruments viz: Accordeons, Flutinas, etc.—Awarded a Diploma.

John G. Dawes, for California-made Flutes, etc.—Awarded a Diploma.

M. Lawton (16 years old) for toy Piano, made without proper tools, the whole work showing a high degree of ingenuity and perseverance most remarkable under the circumstances. —Awarded a Certificate of Merit.

(Signed)

W. C. PEASE
H. S. HOLMES,
JACOB BROWNING
HORACE D. DUNN,
Committee of Award.

CLASS XXIII.

Woollen Manufactures—Comprising all articles of Wool and Mixed Materials, Knit Goods, etc.

Cotton Manufactures.—Comprising all varieties of Cotton Goods.

The manufactures of woollen goods on the Pacific Coast is one of the most valuable our local industries.

Inaugerated on a very limited scale in Oregon in 1857, only the commonest grades of blankets, flannels and cloths were produced. The enterprise and public spirit of our manufactures however has since then more than kept pace with the material advancement of the country, until at the present time all varieties of goods needed that can be produced from the wool clips of California and Oregon are made, and as rule are superior in quality to similar styles imported. The establishment of these mills has also materially benefited our wool growers who have found a local market for their clips at a largely increased price over that paid by expert buyers for the Atlantic States. The progress made by the mills in the production of finer styles of goods has also stimulated wool growers to improve their flocks of sheep by importations of varieties of the finest animals that could be had in the Atlantic States and Europe. The great importance of our domestic manufactures in improving flocks can be readily understood where it is known that the average price paid for California wool prior to 1858 was from seven to ten cents, while the prices paid for the wool clip of 1868 (only ten years later) ranged from seventeen to twenty-three cents, or an average of full twenty cents per pound for the entire wool clip of the coast.

The Pioneer Woolen Mill as before stated, was erected in Oregon in 1857 since which time the manufacture in that State has increased nearly ten-fold in value, and in increased fineness of fabrics made. Oregon at the present time, contains four large woolen mills and several smaller ones are in course of construction the whole consuming nearly three-fourths the entire wool clip produced in that State. The blankets, flannels, broadcloth, cassimeres and other fabrics made by these mills are of excellent quality and compare favorably with best grades of similar goods imported.

In California the first mills were those of the Pioneer Woolen Mills of San Francisco which were erected in 1859, and being destroyed by fire were rebuilt in 1861 on a larger scale, and have subsequently been added to until they contain the largest amount of machinery now to be found in any mill on the coast. The line of manufactures of these mills is very extensive and valuable the representation made by them at the Industrial Exhibition of 1868 being very full and complete. In common with the products of the other woolen mills on the coast, the goods made by this incorporation hold high rank for excellence of materials used and perfection of fabric.

The Mission Woolen Mills were established in San Francisco in 1861, and since that date have been running most of the time night and day, thereby producing a larger amount of goods than the Pioneer Woolen Mills, which with about twenty per cent more machinery, have been run during the day time only. The manufactures of this mill are the most varied of any on the Pacific Coast and being the pioneers in the production of many styles of goods the name of the mills has become a household word in California. The range of goods exhibited by this incorporation in the Industrial Exhibition of 1868 was one of the most attractive features of the Fair, and in connection with the Pioneer and Marysville Woolen Mills, fairly astonished most visitors by the extent of assortment and value, fineness and finish of the fabrics shown. Among other articles exhibited were two pieces of super and ingrain carpets, which were made to show the ability of the mills to produce that article if the demand for them warranted their profitable manufacture. Owing to inability to select a Committee of awards satisfactory to both the Pioneer and Mission Woollen Mills, who were the most important contestants in this class, the Board of Managers decided to rule out the products of both mills from competition, and awarded the gold medal to the Pacific Woolen Mills as being the next most valuable exhibition.

The Pacific Woolen Mills, which are also located in San Francisco, are the only ones producing knit goods on the Pacific Coast. Although only established in 1867 and with a portion of their present machinery, these mills have produced almost all varieties of men's, women's, and children's underwear to be found in this market. It is the aim of the managers of this enterprise to produce all varieties of woolen and merino knit goods imported, and the display made at the Exhibition of 1868 would indicate that the attempt had been successful. It is claimed that finer qualities of wool and merino underwear have been made at these mills than are produced elsewhere in the United States, and the manufacture being successful, will in time cause the breeding of the finest varieties of sheep to furnish the quality of wool which is now imported from Aust. alia.

The other woolen mills in California are the Marysville and Capital Woolen Mills. The former was creditably represented at the Exhibition.

The Committee appointed from the Board of Managers have made the following awards.

Pacific Woolen Mills, California made woolen hosiery.—Awarded a Gold Medal.
Marysville Woolen Mills, California made woolen goods.—Awarded a Diploma.
Oakland Cotton Mills, California made cotton goods.—Awarded a Diploma.
Pioneer Woolen Mills, Caliornia made woolen goods.—no Award.
Mission Woolen Mills, California made woolen goods.—no Award.

CLASS XXIV.

FURS, CLOTHING, HATS AND CAPS.

COMPRISING EVERY VARIETY OF FURS, MEN'S AND BOYS' CLOTHING, ALL KINDS OF HATS AND CAPS NOT MADE OF LEATHER

The manufacture of furs during the last few years has become quite extensive in San Francisco, the more especially within the last twelve months since the acquisition of Alaska by the United States, which has broken up the monopoly in trade which heretofore existed there. Under the sovereignity of the United States the right to trade and purchase furs in Alaska has been open to all American vessels, and the result has been the employment of a fleet of small vessels, whose trading voyages in 1868 have been largely remunerative. The natural market for the furs thus acquired has been and will continue to be in San Francisco, and as a consequence the business of preparing them for use by manufacturing them into articles of clothing or comfort will be largely increased. The shops of our principal furriers already make displays which for extent, value and beauty would be creditable to any of the larger cities in the Union. The representation of this manufacturing interest in the Exhibition was very large and valuable, the furs displayed attracting great attention in connection therewith.

The manufacture of men's and boys' clothing in California is quite extensive and rapidly increasing, the products of our local woolen mills being largely consumed for the purpose, as well as many styles of cloths, casimeres and cloakings imported. San Francisco is the great center of this industry and contains several large wholesale manufactories, in addition to the great number of minor establishments, which are employed in custom work. The indications are quite strong that within a very few years, say four or five, from the present time, that the influx of population from the Atlantic States will contain so large a working element that local manufacture in this branch of industry will completely supply the market.

With the exception of soft felt hats the entire demand for men's and boys' hats and caps is supplied from our local manufactories. In this branch of trade our hatters for excellence of articles produced, as well as elegance of style and taste, stand second to no others in any portion of the United States. In view of the approaching manufactures of silk for which the local production of cocoons will have to be used, it is highly probable that within a decade the manufacture of hatter's silk plush will be successfully accomplished in this State, and lay the foundation of extensive manufacture of hats, to supply the trade of the interior of the continent.

To the Board of Managers of the Mechanics' Fair, 1868.

GENTLEMEN:—The undersigned a Sub Committee appointed to examine and report on division nos. 204 and 206 manufactures of Furs; also, 355, 318 and 240, manufactures of Regalia and Military Goods, respectfully beg leave to report as follows, viz:

Adolph Muller, for the greatest variety and best manufactures of Furs.—Awarded a Silver Medal.

H. Liebes & Co., deserve favorable mention for a good display of Furs.—Awarded a Diploma.

Daniel Norcross, for the greatest variety and best manufacture of Masonic and Odd Fellows regalia and military goods.—Awarded a Diploma.

T. R. Johnson, deserves favorable mention for good workmanship and display of Odd Fellows and Masonic regalia and military goods.—Awarded a Certificate of Merit.

C. T. Blake & Co., deserve favorable mention for a very fine display of Military Goods.—Awarded a Certificate of Merit.

(Signed)

C. A. McNULTY,
SAM'L. L. BRIDGES,
Sub-Committee.

To the Chairman of Committee on Class No. 24.

The undersigned a Sub Committee appointed to examine and report on Division No. 59 98, 281, 317, 349, 40. 44, 77, 108, 160, 304, and 178, report as follows.

To discriminate fairly between the merits of the different contributers of boys' clothing when the excellencies of all are so nearly equal, is no easy task, but from a most careful and critical examination, the majority of your Committee deem S. Figel entitled to the first premium for superiority of style, cut and finish.—Awarded a Diploma.

To Joseph Figel, we award the second, premium.—Awarded a Certificate of Merit.

And while we award the premium to the above, take much pleasure in making honorable mention of similar variety of Boys' Clothing exhibited by Joseph Bros.

Joseph Lancaster exhibits a case of men's pants of California make. There being no competition, the Committee do not report on their merits.—Awarded a Certificate of Merit.

The exhibit of S. Eastern of a variety of mens' clothing, California material, and make is very creditable and bears favorable comparison with the same grade of imported goods. In this there is no competition.—Awarded a Diploma.

H. W. Heineman has a display of California made neck ties, which for neatness of style and variety is entitled to a premium.—Awarded a Diploma.

J. De Barr, first premium California made umbrellas.—Awarded a Diploma.

J. Alsop, second premium California made Parasols.—Awarded a Certificate of Merit.

To the Ladies Co-Operative Union, we award the first premium for California made shirts.—Awarded a Diploma.

To M. Esburg, second premium for California made shirts.—Awarded a Certificate of Merit.

To the Ladies Co-Operative Union, a special premium for a magnificent dressing gown. The superiority of workmanship and style of quilting deserves especial notice.—Awarded a Diploma.

The Committee cannot speak in terms of too great condemnation of the efforts made by many contributors to influence the Committee in their decision. We have conscientiously discharged our duty without fear or favor, and if we have erred in judgment we have done so innocently.

(Signed) H. M. Lockwood.
Wm. Drury.

P. S. The Sub-Committee on Hats and Caps etc. having resigned, your Committee are unable to make any awards.

CLASS XXV.

Silk and its Manufactures—Exhibits of California Silk and Articles made therefrom.—Silk Worms and Culture.

The silk growing interest during the year 1868 has made great progress, and promises to soon acquire prominence in the list of the principal industries of California. Commenced in 1862 by the successful raising of a few worms, the eggs of which were imported from France by Messrs. Hentsch and Berton, bankers in San Francisco, (in connection with Mr. L. Prevost of Santa Clara,) the business of Silk raising has spread so that at the present time more or less persons in all the valley counties of the State have cocooneries, some of which are of comparatively large extent. The business in California is said to be unusually exempt from serious contingencies of loss, as the climate is free from sudden changes of temperature and electric storms, while the mulberry tree, the leaves of which form the feed of the silk worm, is produced in great abundance everywhere, and of a quality healthful and well adapted for silk growing.

To add to the incentives for silk growing which at first met with much discouragement, in inability to procure healthy eggs, and also difficulty in obtaining suitable stocks of trees to furnish food for the worms, the Legislature of the State of California in 1866, and subsequently in 1868, passed laws proffering generous bounties for the production of cocoons and trees. The result of these laws has proved the wisdom of our Legislators who thus gave an impetus to silk raising which has placed the industry fully twenty years in advance of what its natural growth would have been, if left to the encouragement of private enterprise alone. The business has already been shown by actual results to be profitable to all who have practically engaged in it, and a sufficient stock of eggs and trees have been assured in 1869 that will make the interest almost beyond the reach of unfavorable contingencies hereafter.

That the future of California as a silk producing State is now assured, no unbiassed intelligent person will deny, and it only needs the immigration of families to settle up the agricultural sections of the State to make the industry of the first importance to our people. In other words, only an increased number of women and children are needed to engage in the business, which is light and well suited for their profitable employment of time, which otherwise would be mainly lost, while large establishments, like those of Capt. Haynie of Sacramento, and Mr Hoag of Yolo county, will no doubt be increased greatly throughout the State, still in time the great bulk of the silk raised will come from small farms, the aggregate production of which will largely exceed that of the more extensive establishments. Another feature which the raising of cocoons in small lots by the wives and children of farmers will insure will be the profitable reeling of silk by the same parties which process is the preliminary stage looking to the establishment of local manufactures. The successful reeling of cocoons is so simple that those who have witnessed the ease with which it is done, even by children of ten to twelve years of age, can readily foresee that no necessity will exist long for shipment of cocoons abroad, nor the founding of large establishments for reeling silk by skilled labor at home. While in some branches of manufacturing undoubtedly great skill will be required of operatives, some of the preliminary processes are so simple that they can be safely left to the intelligence of women and children at their own homes, and thereby add to the profit of raising cocoons.

It is one of the features of the times that in many branches of industry a pernicious practice has grown up to veil the processes with mystery especially those trades which have their centers of production abroad, among which is silk manufacturing. The experience of American industry has invariably shown, that where the raw product is raised on the soil, the intelligence of our people can in manufacturing readily keep pace with those of any other country, even where the processes have been originally derived. The inventive genius of our people within the last decade has had no rival abroad. It only needs that the present admiration that exists on the part of our population towards foreign manufactures, simply because they are foreign, be removed, to give stimulus to many branches of domestic manufactures which now either languish from lack of intelligent support, or else falsify the natural pride of the country by using fictitious foreign names and labels to insure a profitable sale of products to consumers. It is fully within the bounds of probability that not a decade will pass after silk growing has become a great industry in California, that the manufactures of silk in the other portions of the United States (if not here) will become of such magnitude, variety and value to largely reduce our dependance for those articles on England, France and Italy.

The total production of cocoons in California during 1868 is estimated at 1,350,000, in the following named counties, viz:

Sacramento.	600,000
Yolo.	325,000
Santa Clara.	100,000
Santa Barbara.	200,000
Los Angeles.	25,000
Nevada.	100,000
	1,350,000 cocoons.

The growing of silk in the other valley counties in the State has been so scattered and such comparatively small lots raised, that they have not been estimated in the product above, but the aggregate must have been quite large. A much larger quantity of cocoons would have been made in Sacramento and Yolo counties ,and possibly elsewhere, except for a great difficulty experienced in getting a sufficient supply of suitable food. In this particular the two largest establishments viz: those of Capt. Haynie of Sacramento, and Mr. Hoag of Yolo counties, suffered the greatest loss owing to a belief that the eggs of the French variety of silk worms could be held back by placing them in a cool location and be hatched in detachments during the season as wanted. This belief was found to be an incorrect one, and in May the entire eggs had to be hatched at once, or risk the product of inferior worms, and possibly total loss be experienced. Not being prepared to feed so many worms at one time, after hatching the eggs, these gentlemen had to throw away over half a million worms to insure a state of vigorous health to the balance, which consumed all the leaves their mulberry plantations at that time could supply. This peculiarity of the French variety of silk worm Capt. Haynie determined if possible to remedy, and was successful in breeding a hybrid or cross between the French and Japanese varieties, by which he obtained cocoons of the same size and greater fineness of staple than the pure French, and also the valuable property of raising three or more continuous crops of worms from the original stock had at the commencement of the season. The great advantage of this hybrid will be understood when it is known that a person having mulberry trees only sufficient to furnish leaves to feed 200,000 worms at time, can by using judgement raise from 600,000 to 800,000 cocoons during the same season.

So far in silk raising our growers have had to depend for renumeration upon the State premiums on cocoons and trees, and sales of eggs which are being exported to Europe. During 1868 the six counties before referred to, produced about 1350 ounces of eggs of which about 800 ounces were sold for export and the balance retained for hatching for the stock of the succeeding year.

The above quantity was of the French variety only, the stock of the Japanese variety not being included. The premiums paid by the State to three producers in Sacramento, Yolo and Santa Clara counties, during 1868, was $2,775 on 925,000 cocoons.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute.

GENTLEMEN:—Your Committee appointed to examine the articles exhibited in class 25, Silk and its manufactures report as follows:

They have examined the cocoons raised in various parts of the State, and from several varieties of eggs, and they find them generally very fine in quality. It appears that eggs brought from other countries, whether Asiatic or European, produce healthy worms and that the cocoons are larger than those of the same variety of worm in the countries from which the eggs were brought.

Whether the silk is finer, that is, whether a California cocoon of equal weight with a Italian or Japanese cocoon of the same variety, contains a greater number of yards of silk, your Committee has had no means of ascertaining. They have attempted to test the proportion of gum in California silk, and for this purpose obtained from Mr. Newman a skein of silk wound in the Fair by his machine from California cocoons. This skein by the kindness of the chief assayer was tested in the scales of the United States Mint, and weighed 138 grains. After being boiled for some time with soap, and dried for several hours in ordinary atmosphere, it was again weighed by the managers with the following result:

Weight before boiling.	138 Grains,
Weight after boiling.	104 Grains,
Loss.	34 Grains,

The proportion of gum in the finest silk is 25 per cent., and considering the disadvantage under which this test was made, it is highly satisfactory to find that our silk at the first trial came out within a half per cent. of the best. The circumstances under which this skein was wound were likely to increase the quantity of gum in the hard silk. In winding from the cocoon for commercial puposes this would be changed and there is no doubt that future tests will show the loss in boiling out the gum not to be more than 25 per cent.

Your committee regret that they had no opportunity of making a sufficient test of the fineness of the Silk.

Many of the varieties of the cocoons exhibited deserved and would have obtained especial mention if the growers had furnished your committee with particulars regarding the quantity grown.

They looked for a statement of such particulars from Mesrs Hoag, Haynie, Smith, Goddard, Miller, Izoard and others, but probably owing to the late day at which the nomination of the Committee was fully completed, failed to obtain the information they sought, for

The Committee have therefore concluded to recommend the award of a Silver Medal to Mr. Prevost of San Jose for samples of cocoons of many varieties collected from different parts of the State, for exhibition.

In the opinion of your Committee, to Mr. Prevost more than any other man this State is indebted for the success that has attended the silk experiment, Though the committee have no official knowledge of the facts they may say that they believe him to be yet the third largest silk grower in the State, but in making this award they have borne in mind that he has devoted many years to the object when no one else cared for it and by his correspondence with foreign silk houses and European journalists, who make silk their specialty, he raised an amount of interest in the silk experiments in this State which those who have not studied the facts carefully will hardly credit.

Your Committee consider Mr. Williamson of Sacramento entitled to one of the Institute Diplomas, for the mulberry trees exhibited by him as a sample of 5000. Mr Prevost has also been a successful grower of mulberries by devoting much of his time to raising and distributing seedlings, as well as by furnishing all applicants for eggs with a stock to commence upon. He has assisted directly or indirectly in the foundation of every cocoonery in the State.

Your Committee have given much time to the consideration of the process of manufactures of the silk as exhibited under your auspices. In doing so they had to examine what are the channels by which the silk growers are to obtain remuneration for their labor. At present they are doing so by the sale of the eggs. Until this season, the local trade is all that growers have had to depend upon.

Messrs Hentsch & Berton, bankers of this city. having some knowledge of the business, sent a qualified person to Sacramento to superintend the deposit of the eggs as laid on sheets of cloth prepared for the purpose.

Two of our largest growers, Messrs. Hoag and Haynie, had over six hundred ounces so laid, which Hentsch & Berton purchased as an experiment at $4 per ounce.

These eggs properly packed, are now stored in San Francisco waiting for the best season for transportation to Europe.

Hentsch & Berton are not able to make any definite arrangements for next year until they learn the result of this last venture.

Judging by the prices paid in Japan, they expect the prices will not be far short of $4 an ounce. Mr. Berton thinks that the produce of eggs over and above the local demand will be fully 5,000 ounces. This would give an export trade of some $20,000, and as the European trade in Asiatic eggs is between five and six million dollars annually there is no reason why the trade should not be developed in two years to one hundred fold what it is this year.

At present there is no market here for the cocoons which have been made worthless for ordinary use by the thread being eaten through by the escaping moth.

In Europe the waste from the throwing machine, which prepares the silk for manufacturing purposes is subjected to a variety of processe and worked upon by machinery somewhat similar to that used for cotton, into what is called spun silk. In this country we have not sufficient quantity or the material to make it at present worth while to erec such machinery, and probably the best economy for some years would be to collect and export the waste cocoons to places where they could be used.

In time our woolen and other manufactories may find it worth their while to add silk spinning to their other preparing machinery, for the sake of getting a cheap supply of a yarn which can be used with great advantage in mixed fabrics, such as tweeds, and also for under garments, hose, etc. A small quantity of waste silk from these perforated cocoons might be worked into silk wadding, but local demand would not pay for the erection of the machinery necessary even for so simple a manufacture as wadding.

When the limit of the demand for eggs is reached. and this can easily be done in two or three years, if silk growing is taken up with the spirit with which the raising of wheat and wine has been followed, we must look for a more permanent and wider channel for getting rid of our produce than selling eggs. In short, we must either weave our silk ourselves or prepare it for export to those places where it will be manufactured. In either case, we must overcome the first difficulty, the winding of the silk from the cocoons into hanks. We must discover some method of doing this cheaply and with as little waste as possible. We must also learn to do it so as to keep an even thread, or our silk will neither be fit for making the best class of goods at home nor bring a high price abroad.

Hand labor, unassisted, in this country being out of the question on account of the cost, we require a machine by which silk can be wound rapidly, by which the person in charge can run the fibre of an equal number of cocoons into one thread hour after hour. Further, as the thread in the same cocoon becomes fine as the center is reached. it is necessary to make an even filament, to draw from cocoons in all stages of the unwinding processes. Further, it must be done with as little waste as practicable, and in this item more than any other, more even than in the cost of labor will be found the profit or loss of the operation.

Mr. Neuman has made an attempt at solving this problem by a machine which he exhibited in the Mechanics' Fair, and with which a young lady, who had acquired some skill in the process, wound a considerable quantity of silk from the cocoons. This attempt your Committee consider to be the first step towards solving the problem, in the ready solution of which all, apart from the egg raising trade depends.

They regret that in your disposition of premiums you have not given them authority to recommend the award of a Gold Medal to an exhibition in any branch of the silk business. They, however, believe that the silk trade of this country will, with due encouragement, take rank with that in several other products, as wheat, wine and wool. As they are of opinion that Mr. Neuman and his brother fully deserve all the honor and reward the Institute can bestow upon them for the attempt to reel silk from the cocoons, they take upon themselves to recommend that, although no Gold Medal was offered in Class 25, one be granted to Mr Neuman.

Mr. Neuman's labors to introduce silk weaving into California are very creditable and deserving of a Diploma, if the Managers can do nothing more. The quality of the fabric wove in the Fair is excellent considering the difficulties under which the delicate work was done, To those who judge it by comparison with the best foreign goods we must hint that none but persons practically acquainted with the subject could conceive how great a difference the work of the "finisher" makes upon these goods after they leave the weaver's hands. Had the piece of work in the Institute Fair been of California-raised silk, we should have awarded John Neuman entitled to the highest reward in the gift of the Institute, not merely for the weaving, however, but because the weaving of California silk would have presupposed skill and success in the preparatory operations of reeling from the cocoons, of cleaning and throwing into an organzine and tramm, and of dyeing, that is, these distinct branches of business as well as those pertaining to manufacturing proper.

Your Committee cannot close this report without calling your attention again to the vast importance of the silk business. It is a branch of commerce which is yearly growing in value. The trade between China and London in silk has reached proportions which twenty years ago would have seemed fabulous; and if it has not already done so, it bids fair shortly to eclipse the tea trade. The domestic consumption of silk in all forms in the United States is very large, and soon may be expected to exceed that of any other nation. A modified tariff system as our home manufacture becomes more perfect will give to California the supply of all this raw material if we choose to take advantage of the demand and prepare ourselves for it.

It appears to your Committee that some men of spirit and capital should take up this business of preparing the silk for manufactures. A company which would establisah factory where the processes of winding, throwing and dyeing would be carried on, which would buy the cocoons of the country grower and sell the dyed and reeled silk in the form required to the manufacturer, would be a great aid to the local trade and give a substantial and permanent character to the general business. Not only then would men like Mr. Neuman be able with a moderate capital to turn their hand looms to account, but our local dress and upholstery trimming manufacturers would find half their difficulties removed, Every branch of the local silk manufacturing trade, whether of dress goods, ribbons, fringes, tassels, braid, trimmings, etc., would flourish, whereas now fashion might turn in their favor and their aid be sought to finish special patterns or special colors. Their hands are tied by being so far removed from the localities where the material goes through the preparative processes. It is very certain also that our woollen mills would soon get into the way of manufacturing their dresses of fine dun and other goods into which silk enters if they could obtain the material of the kind and color they require in quantities to suit. The manufacture of sewing silk, buttonhole twist and embroidery silks would form part of the trade of a silk throwing and silk dyeing company.

In the formation of such an establishment the machinery for hard silk throwing and soft silk winding, brought to this country by Mr. Neuman, would be valuable, and that gentleman's knowledge of the business might make his services desirable.

Your Committee may be thought to have travelled out of their sphere in making these suggestions, but they have done so solely because they believe that it is the best and securest method of building up the silk interest.

In recapitulation your Committee will state their recommendations.

First, a Silver Medal to Mr. Prevost, of San Jose, for the best exhibition of cocoons.—Awarded a Silver Medal.

Second, a Diploma to Mr. Williamson, of Sacramento, for his mulberry trees, samples of 5,000.—Awarded a Diploma.

Third, a Gold Medal to Mr. Newman for his exhibition of the process of weaving silks.—Awarded a Diploma.

(Signed) ——

Alexander D. Bell,
Geo. H. Huntsman,
Louis Sachs.

CLASS XXVI.

Sewing Machines and Needle Work—Sewing Machines and Improvements thereon and Skillful Work made on same—Dress Making, Millinry and Fancy Goods.

Almost all the principal kinds of sewing machines and improvements thereon were well represented at the Exhibition, as well as specimens of work done on the same. Owing to a rule established prior to the opening of the Fair, no premiums were awarded to either machines or work, many fine specimens of the latter, however, being exhibited.

The displays of dress making, millinery and fancy goods were quite extensive, and in the two former evinced great delicacy in taste and excellent skill in workmanship. In these particulars our modistes have reason to be proud of their productions which would be creditable to any city in the United States.

To the Managers of the Sixth Industrial Exhibition of the Mechanics' Institute.

GENTLEMEN :—Committee on Cloaks, Millinery and Embroidery, also Fancy Needlework, etc.

The committee of ladies appointed to examine the above-mentioned articles after having thoroughly done so, and conferred together thereupon, beg leave to submit the following report, viz :

Cloaks, by Meyer Jonasson & Co., San Francisco. To these gentlemen, for Cloaks of superior workmanship, made from American and Mission Mills cloths, all manufactured at their own establishment, we would award a first premium.—Awarded a Silver Medal.

Millinery, by Mrs. T. J. Winship, of San Francisco, for a fine display of bonnets, all her own manufacture, evincing good taste and pleasing effect, we award the first premium.—Awarded a Silver Medal.

Ladies' Co-Operative Union. The Committee find as the result of the labors of this truly worthy body, silk embroidery, exquisite hand-sewing and braiding, knitting in cotton and wool, each department of which we consider well worthy of a first premium. Gentlemen will be glad to learn that in this establishment they can have every article of underwear neatly mended ; darning a specialty.—Awarded a Silver Medal.

Shawls, Samson Rosenblatt's, exhibition of costly shawls, real lace and cloaks, which are worthy of honorable mention.—Awarded a Certificate of Merit.

Afghan Embroidery, by Mrs. Capt. J. A. Johnson, we award a Diploma.—Awarded a Diploma.

Quilts in needle-work, to Mrs. W. C. Wilson, of San Jose, for three superior quilts one in silk work and two patch work, very pretty design, we award a Diploma.—Awarded a Diploma.

Silk patch-work quilt, by Miss A. Good, very tastefully arranged in block work, we award a Diploma.—Awarded a Certificate of Merit.

Large seed wreath, by Mrs. M. Harris, worthy honorable mention.—Awarded a Certificate of Merit.

Seaweed.—Best display by Currier & Winter, worthy of honorable mention.—Awarded a Certificate of Merit.

Gloves and feathers cleaned and colored by John F. Snow. As there is no competition, we give honorable mention. –Awarded a Certificate of Merit.

T. Hentz exhibits perforated patterns of every variety of stamping and braiding of his own design, which we think superior to any now in use for their simplicity, and we recommend the award of a Diploma.—Awarded a Diploma.

Pacific Straw Works have the finest display of hats and bonnet frames of every description, California made straw goods, and well worthy of a Diploma.—Awarded a Diploma.

Embroidered pillow slips and stamping by Mrs. A. Bollander, also worthy of a Diploma.—Awarded a Certificate of Merit.

Stamping and embroidered initials, by Mrs. C. S. Sullivan, both equally worthy of honorable mention.—Awarded a Certificate of Merit.

Tatting parasol cover in black silk, beautifully designed, by Miss F. Breece.—Awarded a Diploma.

Pulpit cover ingeniously wrought in fish scales, by Mrs. F Gabriel. As there is no competition we give honorable mention.—Awarded a Certificate of Merit.

Three tatting collars, in fine cotton, by Mrs. J. F. Clement, aged sixty years, for one of very fine quality and large size, we award a Diploma.—Awarded a Diploma.

Mrs. Curtis, improved method of cutting dresses. The Committee have practically examined this model, designed by the late Mrs. Margaret Curtis, and exhibited by Mrs. Barringer, and find it a perfect guide in cutting all that is claimed for it ; we award a Diploma.

Worsted picture, very large size, entered by J. H. Baird, and wrought by Miss V. Crane. aged thirteen years, being so finely worked and correctly shaded, that we consider it worthy of first premium.—Awarded a Diploma.

Eureka, Schiller and Shakespeare, three worthy pictures worked in gold, silver, and silk embroidery, by Mrs. Juliana Bayer, of Sacramento. We award honorable mention.—Awarded a Certificate of Merit.

Tatting collar, by Mrs. F. R. Jacks.—Awarded a Certificate of Merit.

Artificial flower basket, by Claus & Co., very pretty. As there is no competition we give them honorable mention.—Awarded a Certificate of Merit.

Patch-work quilt, very ingeniously made of small strips of flannel and alpacca, using many hundred pieces and arranged in mosaic, by whom we are unable to learn. Awarded a Diploma.

Carpet and rug made by hand, by Mrs. E. T. Newton ; we find them very ingeniously made of every description of woolen rags arranged in boquets of flowers exhibiting great taste and skill in the shading of colors. We award a Diploma.—Awarded a Diploma.

Linen table Covers, spun from flax and woven by hand, by Mrs. A. S. Knapp, of Maine, at the age of sixty years ; honorable mention.—Awarded a Diploma.

Phantom wreath, by Miss L. McClure, of Redwood City ; beautiful specimen and tastefully arranged.—Awarded a Certificate of Merit.

Wreath of California wild flowers encircling a pencil sketch of the Golden Gate, by Miss Mary Haviland ; worthy of honorable mention—Awarded a Certificate of Merit.

Crochet bed spreads, by Mrs. G. Mohrent, beautifully worked ; worthy of a Diploma.—Awarded a Diploma.

Patch-work quilt, by Miss A. Murphy ; we give honorable mention.—Awarded a Certificate of Merit.

Worsted sofa pillow, by Miss M. E. Garlack. We award a Diploma.—Awarded a Certificate of Merit.

Jacobs, Newman & Co., exhibit a fine quality of hoop skirts. As there is no competition we award honorable mention.—Awarded a Certificate of Merit.

Golden City Straw Works for tasty patterns in braid of California straw and fancy bonnet frames. We award a Certificate of Merit.—Awarded a Certificate of Merit.

Counterpanes and two table covers, by Miss A. Von Rowen ; honorable mention.—Awarded a Certificate of Merit.

Seven knitted tidies and three pairs of knitted stockings, beautifully executed by Mrs. Watson, aged eighty years ; award a Diploma.—Awarded a Diploma.

(Signed)

MRS CAPT. FRANCIS CONNOR,
MRS. J. B. HARMSTEAD,
MRS. H. M. NEWHALL,
MRS. P. CADUC,
MRS. HENRY CARLTON, JR.

CLASS XXVII.

California Wines and Brandies—Also Native and Foreign Distilled Spirit and Malt Liquors, Bitters, Syrups, Cordials, Essences, Punches and Mixed Liquors.

The Wine interest of California now outranks in value all others of her agricultural resources with exceptions of grain, wool and livestock, and at its present rate of progression within another decade will probably stand next to grain, if not ahead of it, in pecuniary importance.

That this is no vain assertion, the rapid increase in planting vines and in fruitage of those already in bearing, in connection with vast numbers of vines just coming into bearing shows. The ratio of increase during the last two seasons over their predecessors has been enormous, the vintage of 1866 being estimated by experts at 2,500,000, of 1867 at 3,500,000 and in 1868 at about 7,000,000 gallons wine. What the wine crop of the coming year, 1869, will be is of course as yet uncertain, but good judges estimate it will be in case of a favorable season fully 10,000,000 gallons. These are very large figures to set the produce of wine for a single season, when it is considered that the entire population of California reaches only to about 500,000, of which probably not over two and a half per cent are engaged in wine culture. The total number of vines planted, as reported by county assessors in 1867, which is the latest report, was 20,975,040, but these reports are known in very important instances to have been very incorrect, assessors generally estimating the number of vines to an acre at about 600 which is the minimum of planting, as the rule has been from 680 to 1200 probably averaging 900 per acre thoughout the entire State while many of the assessors omitted counting cuttings under two years age and others only took bearing vines. These discrepencies in estimating the vines growing and the large increase in planting during the last year, it is believed is about one third the total which by good judges is placed at fully 30,000,000 vines all of which in 1872 will be in full bearing. Of this amount probably one sixth are imported or foreign varieties and the balance the native or Mission grapes. The superior excellence of wine made from foreign varieties of grapes is now being acknowledged by most intelligent wine growers. As a consequence, the greater part of the vines being planted at present are of foreign varieties while many wine growers are grafting the same on bearing Mission stocks with view of ultimately dispensing with the latter entirely.

The great drawbacks to the California wine interest. have heretofore been the lack of knowledge in wine making and afterwards taking proper care of wines when made by our vinters. The lack of capital and difficulty in obtaining money on loan, and excessive rates of interest charged have also prevented the keeping of wines until of sufficient age to ripen over two years old, which is the shortest time at which they should be marketed. Wine drinkers accustomed to the fully ripened vintages of Europe have therefore in many instances made comparisons unfavorable to our wines, from not making allowances for lack of age and the benefit of a long sea voyage which all foreign wines have experienced.

The California or Mission grape is also unsuitable for making many kinds of wine to compare favorably with the product of the more delicate flavored and fuller aroma of the varieties of grapes which produce the most valuable wines of Europe. From this latter cause alone comes much of the objection to California wines from a class of persons whose tastes have been educated by the product of vineyards abroad, and who to a very large extent now prejudge our native wines without trying them. That the so-called ground taste generally prevailed years since, in most of the wines made from the Mission grape is true, but the increased age of the bearing vines, improved varieties and methods of cultivation, making and taking care of later vintages, have very largely remedied that defect. It seems somewhat strange, therefore, that prejudice should prevent a large and influential class of persons who are habitual wine drinkers from using California wines, even in many cases refusing to taste them. In other cases the name California being mentioned, a superficial and prejudged examination of the merits of our wines is made, be follow with the stereotyped phrase or compliment expressed, "that the wine is very good for California, but still has the same old ground taste." Our wine growers have, however, the satisfaction of knowing that to a large extent their wine is being consumed by this same class of persons who find it at the majority of restaurants in San Francisco, and who paying high prices on account of German and French labels on the bottles consider the brands as *bona fide* imported. That our native wines are fast taking the place of the medium quality of light German and French wines in California is undeniable, as importations of the latter have been largely discontinued, and it is difficult to find any considerable quantities of them either in cask or cases.

A great revolution in wine drinking in the United States is certain to be soon brought about when wine from foreign varieties of grapes is made in large quantities in California. This change is sure to be made within a decade when the vines come into full bearing, as the wines already made from them have proved of most excellent flavor. The Black Zinfindel grape produces an excellent dark red wine rivaling the best Chambertin imported. The same grape produces a white wine of excellent quality. The Feher Szagos grape a fine white wine similar to Malaga, and the White Pineau grape when made into wine in the foothills of the Sierra Nevadas, a most superb wine whose flavor at four years age resembles the very finest and delicate sherry wines imported but without the objection of the alcoholic fiery taste which is the concomitant of all imported wine of that variety. The White Frontignon or Malaga Muscatella also makes wines of rich perfume and flavor, and according to the age of ripeness at which they are picked, resemble the finest quality of Heck or the Moselle wines which are such favorites wherever known.

The manufacture of sparkling wine or champagne during the the past year has been pushed with great vigor and success in California. At the present time the State possesses only two establishments viz: Buena Vista Vinecultural Society, Sonoma, and I. Landsberger San Francisco producing such wine made by natural fermentation in the bottle, as is the case in the best champagne manufactories in France. This natural fermentation is produced by the simple addition of rock candy or clarified white sugar to still white wine, which latter after bottling is subjected to a certain degree of heat. The heat produces the fermentation desired and causes all the impurities in the wine to settle in the form of a sediment on one side of the bottle, which by subsequent manipulations is deposited on the inside of the cork leaving the wine above it clear and bright. The cork is now removed, the carbonic acid gas which has been generated forcing out the sediment and some wine along with it. The wine is dosed or sweetened, the bottles filled up and re-corked, tied with string and wired, and is then ready for shipment, the entire process taking four or five months. There are several establishments in San Francisco which produce a so-called sparkling wine or champagne by forcing carbonic acid gas through the use of a soda fountain into sweetened still wine in bottles, but the product of such an operation is not healthful and causes nausea, headache, etc., which sparkling wine made by natural fermentation does not.

The distilling of brandy from wine, grapes or grape pummace is largely engaged in in California. the total product in 1868 being estimated at 400,000 proof gallons. The brandy thus made is of various degrees of excellence according to the distilling apparatus used and the care and attention bestowed on the process. The product of the native or

Mission grape after distillation has, however, to some extent the defects and flavor as is the case with the wine. The largely increased production of foreign varieties of grapes, however, promises to remedy this defect and cause our brandies in time to take equal rank with the best brands imported from France. The newly invented (Johnston's) patent still, promises to soon bring this result about as by its use the fusil oil from which comes the acrid ground taste is separated, while the natural oils of the grape which give it flavor pass over with the purified spirit. The brandy thus made while perfectly free from fusil oil possesses the flavor of the grapes from which it is made and is more healthful than any alcoholic spirit called by the same name can be, when flavored as is the common practice by essential oils.

A very large amount of alcohol, whiskey and other spirits is annually distilled from grain and other materials in California, the great bulk, however, being produced in San Francisco, the quality of the spirits comparing favorably with those made in the Atlantic States.

The geographical position of California should cause her to become the producer of malt liquors and beverages to supply the entire American Pacific coast, Hawaiian and other islands as well as Japan, China and other Asiatic markets. The excellent quality of California barley and hops for brewing should in connection with short and cheap water transportation give our brewers great facilities over rivals in the Atlantic States and Europe. So far, our breweries have confined their operations to supplying the local demand, and have gradually driven out the great bulk of importations from Great Britain, which heretofore monopolized our home markets. It is to be hoped that with the completion of the Pacific Railroad that the enlarged capital and skill required to successfully manufacture malt liquors for export will be had, and a most valuable and profitable business be done with foreign countries bordering on the Pacific. Without some such outlet our hop growers will find their business much circumscribed in future, and producers of barley be largely dependant in shipping their grain to foreign markets.

The numerous varieties of bitters, syrups, essences, cordials and mixed liquors used by our people are largely produced in California, and for merit probably are not inferior to any similar preparations put up elsewhere.

To the Managers of the Sixth Industrial Fair.

Gentlemen:—The Judges of Award on California Wines, Brandies, Bitters, Cordials, &c. Class No. 27 met at the Pavilion on Thursday September 3d.

Present:—C. A. McNulty, Ralph Emerson, Carl Precht, A. J. Bryant.

Absent:—Judge Hoffman, J. Mora, Moss, Henry Kenitser.

A quorum of the Committee being present, on motion, C. A. McNulty was elected Chairman, and Ralph Emerson appointed Secretary.

The Committee then proceeded to the examination of wines &c. presented for competition, and continued these examinations from day to day (the same quorum being always present) until the 10th inst., when the examinations were completed.

The following report of the Judges of Award, is most respectfully submitted.

WHITE WINE 1857.

No. 1. Kohler & Frohling, no competition, ordinary wine not much improved by age.—Awarded a Diploma.

WHITE WINE, 1862.

No. 2. M. Keller, no competition, ordinary wine of fair quality.—Awarded a Diploma.

WHITE WINE, 1863.

No. 3.
No. 4. Anaheim Wine Growers Association the best and is a very superior article.—Awarded a Diploma.

WHITE WINE, 1864.

No. 5. J. R. Snyder's, is a good wine.
No. 6.
No. 7. Anaheim Wine Growers Association, is the best.—Awarded a Diploma.
No. 8. Eberhard & Lachman, is a good wine.

WHITE WINE, 1865.

No. 9.
No. 10.
No. 11. L. Tichner, is a good wine.
No. 12. I. Landsberger, is the best wine.—Awarded a Diploma.

SECOND DAY, FRIDAY, SEPTEMBER 4th.

WHITE WINE, 1866.

No. 13.
No. 14.
No. 15.
No. 16.
No. 17. I. Landsberger is second to Buena Vista V. S.
No. 18. Buena Vista V. S. is superior to all 1866 wine.—Awarded a Diploma.
No. 19.
No. 20.

WHITE WINE, 1867.

No. 21.
No. 22.
No. 23. Eberhard & Lachman, is the best, but,
No. 24. all are too new.—Awarded a Diploma.

RED WINE, 1864.

No. 1. J. R. Snyder, Sonoma, no competition. This is a *very remarkably*, fine wine.

RED WINE 1865.

No. 2.
No. 3.
No. 4. C. F. Leiding, is the best, a fair wine.—Awarded a Diploma.
No. 5.

RED WINE, 1867.

No. 6. Not worth mentioning, all too new.—Awarded a Diploma.
No. 7.

PORT WINE, 1857.

No. 1. Kohler & Frohling, this is a very superior Port Wine, no competition.—Awarded a Diploma.

PORT WINE, 1858.

No. 2. B. D. Wilson, this is a very superior Port Wine, no competition.—Awarded a Diploma.

PORT WINE, 1860.

No. 3. B. D. Wilson, this is also a very superior Port Wine, no competiton.—Awarded a Diploma.

PORT WINE. 1865.

No. 4. Kohler & Frohling' is a pleasant high flavored, No. 4½ is a good wine, rather sweet.—a good wine, better than No 4½.—Awarded a Diploma.

PORT WINE, 1866.

No. 5.
No. 6. B. D. Wilson, a very fair wine, the best.—Awarded a Diploma.
No. 7.
No. 8. Kohler & Frohling, will be a good wine with age.

PORT WINE, 1867.

No. 9. M. Keller, the best, both too young.—Awarded Diploma.
No. 10.

ANGELICA.

No. 1.
No. 2.
No. 3.
No. 4. Kohler & Frohlings, is the best, none of them remarkable.—Awarded a Diploma.
No. 5.

MUSCATEL.

No. 1.
No. 2. Eberhard & Lachman is the best, nothing remarkable.—Awarded a Diploma.
No. 3.

SHERRY WINE.

No. 1.
No. 2. Eberhard & Lachman, is the best, nothing remarkable, we expected better wines.—Awarded a Diploma.
No. 3.
No. 4.

MALAGA.

No. 1. Eberhard & Lachman, a very good wine, no competition.—Awarded a Diploma

MADEIRA.

No. 1.
No. 2. All inferior, no choice.
No. 3.

BRANDY, 1860.

No. 1. Kohler & Frohling, very fine and pure, no competitor.—Awarded a Diploma.

BRANDY, 1864.

No. 2. J. R. Snyder, very fair, pure, no competitor.—Awarded a Diploma.

BRANDY, 1866.

No. 3.
No. 4.
No. 5.
No. 6.
No. 7. R. N. Bugbey's, is the best, all too new.—Awarded a Diploma.
No. 8.
No. 9.
No. 10.
No. 11. Buena Vista V. S. is superior to No. 8, 9 and 10, all to young.—Awarded a Diploma.

PEACH BRANDY.

No. 12. Eberhard & Lachman's, is the best.—Awarded a Diploma.
No. 13.

WINE FROM FOREIGN GRAPES.

No. 1 to 19. A variety of white wines &c. of superior quality B. N. Bagley, no competitor.—Awarded a Diploma.

CHAMPAGNE WINE.

No. 1.
No. 2. Buena Vista V. S. is second to No. 3.
No. 3. I. Landsberger's is fair wine.
No. 4. I. Landsberger's is the best.

BITTERS.

No. 1.
No. 2. L. Gross & Co. "Henley's bitters," is the best.—Awarded a Diploma.

BRANDY BITTERS,

No. 1. P. & C. J. Cassins, very fine bitters.—Awarded a Diploma.

WINE BITTERS.

No. 1. M. Keller, is the best.—Awarded a Diploma.
No. 2.

WHITE WINE, 1860.

No. 1. W. J. Strenttzel, a good wine, no competitor.—Awarded a Diploma.

SQUARZAS PUNCHES, &c.

Nos. 1 to 14.

RICCI'S PUNCHES-

Nos. 1 to 7.

A close contest, Squarzas pronounced the best Riccis only second to Squarzas.—Awarded a Diploma.

PORTER & ALE IN BOTTLES.

No. 1. S. Mark's excellent quality of *Pale Ale*, no competitor.—Awarded a Diploma.
No. 1. Bennett's Porter, is the best.—Awarded a Diploma.
No. 2.

HALF & HALF.

No. 1. J. Sajous, very good, no competition.—Awarded a Diploma.

FOREIGN AND DOMESTIC WINES AND LIQUORS.

Whiting & Berry, dealers, have on exhibition a very large and good assortment of fine wines and Liquors, and are entitled to favorable mention, for the superior selection of their assortment.—Awarded a Certificate Merit.

SYRUPS & CORDIALS.

McMillin & Kester, a fine variety of good sryups, cordials and extracts, no competitors, California manufactures.—Awarded a Diploma.

RECAPITULATION.

White wine from foreign grapes B. N. Bugbey is entitled to the preference for the best wine exhibited.—Awarded a Gold Medal.

RED WINE, (no name).

Jacob R. Snyder is entitled to the preference for the best red wine exhibited.—Awarded a Silver Medal.

I. Landsberger is entitled to the first premium for the best sparkling wine exhibited.—Awarded a Silver Medal.

PORT WINE.

B. D. Wilson is entitled to the preference for the best port wine exhibited.—Awarded a Silver Medal.

By order of the Judges of Award.

(Signed) Ralph Emerson, Secretary.

CLASS XXVIII.

Horticulture, Agriculture, etc., Comprising Exhibitions of Flowers, Plants, Agricultural Products, Fruits and Vegetables, Butter and Cheese.

In horticulture, California is exceedingly rich, almost all plants, flowering shrubs, fruits and vegetables, in the known world that have been tried producing well in some portions of the State. The exceptions are confined only to strictly tropical vegetation which have never been known to grow in the temperate zones in the open air. The mild equableness of our climate, in connection with a rich virgin soil, gives a perfection to both flowering vegetation and fruit not found elsewhere in the United States.

The range of fruitage is extremely large, the same localities often producing the orange, fig, pomegranate, olive, citron, lemon and lime of the tropics, with the apple, pear, peach, plum, grape and quince of the temperate zone. All these fruits possess excellence of flavor, beauty and size rarely equalled in other countries where they are produced. This great perfection in quality in varied fruits that elsewhere are not to be found in common, combined with an unusual luxuriance in production, forms one of the great natural wonders and attractions of California, which has to be seen to be fully understood. The time is not far distant when California will supply the other portions of the United States with fruits which now are entirely imported. Among these will be raisins, dried (Zante), currants, figs, citron (of Commerce) olives, almonds, Maderia nuts (English walnuts), Italian chestnuts, filberts and green fruits, such as oranges, lemons and limes, besides all the most tender and luscious varieties of grapes known only in Southern Europe. In view of the vast markets now opening for these fruits by the completion of the Pacific Railroad, our farming population are planting trees and vines in immense numbers, so as within a decade at farthest to be able to supply the demand.

The agricultural products of California are as varied in character as her horticulture, and promise to more than keep pace with the latter in the future. In the production of wheat she is already third, and will probably in 1869 be second, if not first in the list of States raising that cereal, and is in barley the first and oats the fourth in rank. Great progress has been made in the production of hops, flaxseed, mustard, chicory, millet, canary seed, hemp, tobacco, castor beans, and many other varieties of vegetation all of which have proved lucrative and promise to be largely increased in the future.

In the production of butter and cheese our dairymen have been very successful, both articles being generally of superior excellence and flavor At the present time the consumption of these articles is fully one-third more than the production, the deficiency being supplied by importations from New York, which are mainly consumed by our mining population. There is a still larger production needed to supply the large accession to the mining population of Nevada, into which State a vast immigration of consumers is certain to take place during the year 1869. No branch of farming labor has so far paid more steady and remunerative returns than dairying has to those engaged in it in California, and it is to be hoped that the enterprise of our people will be equal to supply the whole demand in this particular hereafter. The numerous valleys in the Coast Range mountains in California have been found best adapted for dairying purposes owing to more moderate temperature during summer and the longer continuance of grass which, from the effect of the sea fogs, remains green longer than elsewhere.

To the President and Board of Managers of the Mechanics' Institute.

Gentlemen :—Your Committee to whom was referred Class 28. comprising Agriculture and Horticulture, respectfully beg leave to present the following report:

D. L. Perkins, Golden Gate Seed Gardens, Oakland, special premium for exhibited samples (146), of agricultural seeds, raised and put up by him to fill an order from Belgium. The excellent quality of the various seeds, as well as the superior manner in which they are put up reflects great credit on the exhibitor. and opens a new feature in commerce, in which we are proud to believe our beautiful State will stand unrivaled. To Mr. Perkins we would recommend the first premium.—Awarded a Silver Medal.

Kilbourn Brothers, Antioch, Contra Costa Co., exhibit samples of five varieties of wheat from 320 acres, yielding 51 bushels per acre.—Awarded a Diploma.

Mr. James Lick, Santa Clara, exhibits fine samples of castor beans, sorghum, hemp, tobacco and sun flowers grown on his ranch, for which the Institute's Diploma is recommended.—Awarded a Diploma.

J. C. Polhemus exhibits sample of Egyptian wheat from a field of 600 acres, adjoining the Rancho Los Coyotes, between Los Angeles and Anaheim; estimated yield 70 bushels per acre.—Awarded a Certificate of Merit.

R. B. Woodward, Esq., special premium for fourteen varieties of grapes, raised under glass, which for size of fruit, symmetry of form of bunch, and a high order of culture in every respect defy competition and bespeak great praise for the gardener in charge.—Awarded a Special Diploma.

First premium, W. Cantelow, Vaca Valley, for fourteen varieties of market grapes, of superior quality, from his vineyard of 10,000 bearing vines, embracing the "Rose of Peru," "Napoleon," "Black," "Pearley," "Rose," "Musk,' and other fine varieties, one extra black variety not named.—Awarded a Silver Medal.

Second premium to M. R. Miller, Pleasant Valley, Solano Co., for three varieties of grapes; the extent of his vineyard not given.—Awarded a Certificate of Merit.

First premium, R. Kerchival, Sacramento River, for the best display of apples, ten varieties, all fine specimen fruit; Mr. Kerchival also exhibits fine specimens of the pound pear.—Awarded a Diploma.

Second premium, D. L. Perkins, Golden Gate Orchard, Oakland, twenty varieties of apples; many of the varieties are not up to the standard of their kinds. Mr. Perkins also exhibits 14 varieties of pears, 8 do. of plums, and a sample of Siberian crab.—Awarded a Certificate of Merit.

First premium, James Holland, Sacramento, for fine display of Columbia and purple Duane plums. Of the former he has 200, and of the latter 400 bearing trees; Mr. Holland also exhibits fine specimens of the Bartlett pear, of which he has about 1,000 trees; also splendid samples of the Duchess De Angoleme pear, of which he has 700 bearing trees, for which your Committee recommend the Institute's Diploma.—Awarded a Diploma.

Frst Premium, T. Hart Hyatt, for the best display of pears, comprising nine varieties. Mr. Hyatt also exhibits some varieties of apples and three varieties of plums.

Your Committee have also examined Mr. Hyatt's treatise on the culture of the grape, and believe it to be the best hand-book published on thatsubject for California vine culture, and for which they recommend a special premium.—Awarded a Special Diploma.

First premium to J. V. Sims, Sacramento River, four varieties of peaches.—Awarded a Diploma.

Special premium, Dr. H. Hale, Alameda, samples of lemons in different stages of growth, raised under out-door culture; also exhibits a fine sample of Bradshaw plum.—Awarded a Diploma.

S. Runyon exhibits very fair samples of pears and peaches.—Awarded a Diploma.

B. N. Bugbey exhibits a box of California raisins which are worthy of honorable mention.—Awarded a Diploma.

Thos. Vear exhibits sample of peaches.

W. M. Haynie, Sacramento, exhibits a very prolific branch of hops but without remarks as to the amount under cultivation.—Awarded a Diploma.

E. J. Cummings exhibits a jar of ten year old brandy peaches, and a jar of nectarines, same age, all of which look exceedingly beautiful.—Awarded a Certificate of Merit.

V. Wackenreuder, San Bruno Road, exhibits a basket of fruit, grapes, peaches and pears, raised without irrigation.

Col. Warren exhibits a very nice collection of fruits, consisting of pears, plums, and peaches grown in his private garden in this city; also a collection of plants and flowers, among which we notice some fine specimen blooms of amarillie, grandiflora a dense tree of brilliant double holyhock from seeds, a splendid seedling variety of datina, and his exquisite seedling geranium, named by the Colonel with no slight degree of gallantry, *Parepa Rosa*, all grouped in bold relief, and vieing with each other in the adornment of his ancient and time-honored bag of flour. The Colonel's untiring energy in botanical and scientific researches merits the highest encomiums.—Awarded a Certificate of Merit.

R. B. Woodward, Esq., special premium for a superb collection of rare and beautiful tropical fruits and plants which enriches the attraction of the pavilion materially.—Awarded a Diploma.

Rustic landscape design, special premium to Messrs. Collie and Stewart, for a beautifully executed villa landscape in rustic, with appropriate parks, fountains, trees, and other surroundings.—Awarded a Diploma.

Hardy plants, trees and shrubs, first premium to J. O'Hare, for the largest and most varied collection of hard and half hardy trees and shrubs. —Awarded a Diploma.

Second premium to Messrs. Collie and Stewart for a collection of hardy, half hardy and tender trees and plants.—Awarded a Certificate of Merit.

Collie and Stewart also exhibit some very neat hanging baskets in moss and rustic work.

First premium, cut flowers, John O'Hare, for the largest and best collection comprising dahlias, roses, verbenas, gladiolias in var, fuchsias, stock gillys, marygolds, etc.; also specimen blooms of three superb seedling geraniums, "President Lincoln," "Smiling Morn," and "Fashion."—Awarded a Diploma.

Second premium, Messrs. Collie and Stewart, for display of dahlias, gladiolas penstemons and roses.—Awarded a Certificate of Merit.

Special premium is recommended to James Hutchison, Oakland, for his magnificent collection of rose dahlias, anterhirnums and seedling hollyhocks.—Awarded a Special Diploma.

S. Tonner, of San Jose, exhibits a pruning and grafting saw and grafting wax, but entered too late for the Committee to act further than to recommend their superior merits.—Awarded a Certificate of Merit.

The Committee regard the limited display of fruit and flowers exhibited on this occasion, as well as the almost total absence of a majority of the more staple products coming under this class with regret, and sincerely hope that as the Mechanics' Institute advances in experience and wins the entire confidence of an approving public, that more extensive and systematic inducements may be held out to contributors, and more appropriate arrangements made for the better preservation of articles exhibited under this head.

(Signed)

JOHN H. GILMORE,
HENRY K. CUMMINGS,
CHAS. J. PILSBURY.

CLASS XXIX.

SUBSTANCES USED FOR FOOD.

COMPRISING NATURAL AND MANUFACTURED PRODUCTS, FLOUR, WHEAT, GRAIN AND SEEDS, BREAD AND CRACKERS, FRESH AND DRY, MACARONI AND PASTE, SPICES, MUSTARD, COFFEE, PRESERVED MEATS, FISH, FRUITS, PRESERVES, PICKLES AND VINEGAR, SUGAR, CANDY, SYRUPS, ETC.

In the production of the above articles used for food, California supplies from her own soil almost all that are required. With exception of spices, coffee, some varieties of fish and sugar and its syrups, all the articles in this class are produced in California. Of wheat the finest qualities are produced, and at the World's Fair at Paris in 1867, our State received the Silver Medal awarded to that grain from the United States. Barley which is the great staple feed grain as well as for brewing, is not surpassed in general quality for these purposes elsewhere, which can to a considerable extent be said of our corn, oats, and rye. The vegetable seeds of California have been noted wherever used as being superior to any other, their product being so remarkably large and perfect as to surprise all who have seen them. California flour has enjoyed so high a reputation wherever known that commendation of its quality would here seem superfluous. The ship bread made in California has been found fully equal to the best known, and crackers have a reputation superior to any imported.

One of the most noted features in this class is the macaroni and other pastes made in California, of which there are two extensive manufactories in San Francisco. The makers of these establishments have not only by their superiority in freshness and quality driven out importations from France and Italy, but have been quite largely exported to foreign ports on the Pacific with profitable results.

Our local manufactories have in the production of ground spices and coffee, as well as mustard, completely monopolized markets on the Pacific slope.

With the exception of oysters, all varieties of canned fish are put up on the Pacific coast to the exclusion of importations. Preserved meats, fruits, preserves, vegetables and pickles are entirely supplied by our local establishments, and some kinds like tomatoes are exported in considerable quantities. Vinegar of all varieties or kinds are made on the Pacific coast, driving out importations.

The great bulk of refined sugars consumed are made in the sugar refineries located in San Francisco, as is also the case with syrups. The raw sugars have so far been entirely imported, but the cultivation of the sugar beet having attracted notice efforts are being made for the erection of a sugar manufactory which will be in operation in 1869, and if successful will encourage the cultivation of sugar beets and ultimately drive out importations from the market. In this class of the Exhibition the next three years p omises to make as great developements as in any other and the results will probably be as profitable.

To the President and Board of Managers of the Mechanics' Institute, 1868.

The Committee on Class 29 having attended to the duties assigned to them, now report:

The Commiitee regret that only three out of the five who were designated consented to serve. If private duties could always constitute a valid excuse, public duties even more important would be neglected.

The Committee have devoted much time to a careful and patient examination of the articles in this class.

Samples of various grades of sugar were exhibited by the two sugar refineries now in operation in this city.

We recommend the award of a Silver Medal to the California Sugar Refinery for superior syrups and for the best sample of refined sugar called marble slab sugar.—Awarded a Silver Medal.

We award to the San Francisco and Pacific Sugar Refineries a Diploma for excellence in various grades of refined sugar.—Awarded a Diploma.

To the Boston Cracker Company for the best quality of crackers, large and small, a Diploma.—Awarded a Diploma.

Honorable mention is also made of the fine assortment of crackers and cakes exhibited by the Boston Cracker Bakery.—Awarded a Certificate of Merit.

We award a Diploma to B. A. Ackerman for concentrated extract of coffee.—Awarded a Diploma.

Also a Diploma to E.J. Cummings for preserved peaches and nectarines— Awarded a Diploma.

Honorable mention is made of samples of ground California mustard exhibited by John Knoll.—Awarded a Certificate of Merit.

We award a Diploma to the Pioneer Flour Mills for best quality of flour and meal of sundry kinds.—Awarded a Diploma.

Also a Diploma to Messrs. Brigrnardello Macchiavello & Co., for the best quality of macaroni and vermicelli (manufactured here.)—Awarded a Diploma.

We award to Marden & Myrick a Diploma for excellence of ground coffee—Awarded a Diploma.

A Diploma is also awarded to W. M. Boyd for California yeast powders of superior quality.—Awarded a Diploma.

Honorable mention is also made of the yeast powder exhibited by T. Donnoly & Co.—Awarded a Certificate of Merit.

Also of macaroni and vermicili exhibited by Ravenna Ghirardelli & Co.—Awarded a Certificate of Merit.

A Diploma is recommended to H. J. Clayton for salad dressing.—Awarded a Diploma.

Honorable mention is also made of olive oil from native olives, exhibited by C. Louis.—Awarded a Certificate of Merit.

A Diploma is awarded to the Bernard Coffee and Spice Mills for a superior quality of ground spices.—Awarded a Diploma.

A Diploma is awarded to B. F. Barton & Co., for superior Cream of Tartar and Bi-Carbonate of soda.—Awarded a Diploma

Also to C. Borchard, for candy of good quality.—Awarded a Certificate of Merit.

A Diploma is awarded to T. W. McCollom & Co., for codfish of superior quality, cured near San Francisco.—Awarded a Diploma.

We award a Diploma to B. F. Barton & Co., for table salt of a superior quality.—Awarded a Diploma.

Also to Crystal Salt Works for excellent salt for curing pork.—Awarded a Diploma.

Honorable mention is also made of dairy and other salt from Carmen Island, exhibited by Holladay & Brenham.—Awarded a Certificate of Merit.

We award to the California Chicory Company a Diploma for chicory, raw and manufactured, of excellent quality.—Awarded a Diploma.

(Signed)
W. C. Bartlett,
John Center,
C. L. Kellogg.

The Committee of Award, of the Board of Managers give the first premium to Geo. Haas & Co., for best candy exhibited; the same having been overlooked by Committee of Judges.—Awarded a Diploma.

CLASS XXX.

This class in the Exhibition occupies a wide range, being intended to include the thousand and one articles which could not properly be assigned to any one previous named class. The result has been the display of a very large number of articles of necessity, taste and invention, the aggregate value of which to the public in many ways cannot be estimated by simple pecuniary results. Probably no class has shown such evidences of judicious discrimination and accessory attractions to all that gild, adorn and make desirable mental and intellectual human nature, and give a tone of moral worth to the best claims of society. It is too usual at the present era to waste valuable time in habits of idleness and frivolity which in the end produce results that are often lamented by those looking to the general welfare of humanity. The thousand and one trifles of woman's skill, art or assiduity in painting, knitting, sewing, embroidery, etc., in the absence of stern incentives to more necessary work are to be commenced and admired. It is the great fault of the age that woman's habit is to be abroad and not in the home of her husband or family attending to the wants of those whom Providence may have committed to her care.

CLASS 30—SECTION 1.

To the President and Directors of the Mechanics' Institute.

Gentlemen:—We, the undersigned, having been appointed by your honorable body as a Committee on Cigars, Tobacco, and Snuff, beg leave to submit the following report:

CIGARS.

Joseph Gross, first premium.—Awarded a Special Diploma.

Julius Monio, second premium.—Awarded a Diploma.

B. C. Horn, third premium.—Awarded a Certificate of Merit.

SMOKING TOBACCO.

B. C. Horn (Horn's latest), first premium.—Awarded a Diploma.

Parker Watson & Co. (Olive), second premium.—Awarded a Certificate of Merit.

SMOKING TOBACCO, DOMESTIC.

Chas. G. Emery & Co., for Green Seal, first premium.—Awarded a Diploma.

CHEWING TOBACCO, FINE CUT.

B. C. Horn (Horn's best), first premium.—Awarded a Diploma.

PLUG TOBACCO.

In this case the Committee could only judge by appearances, as the tobacco was all in boxes, therefore we award the first premium to Parker Watson & Co., for the finest display.—Awarded a Diploma.

SNUFF.

For the finest display of snuff, Scotch, French, Rappee, Lundefoot, Maccaboy, and other brands, we award the first premium to George J. Hobe.—Awarded a Diploma.

MEERSCHAUM PIPES, FOREIGN AND DOMESTIC.

Premium to Son & Briggs, for the finest display of foreign pipes.

For pipes of domestic manufacture, we award the first premium to Chas. Kohlman, who makes a fine display of amber mouth pieces, amber beads, meerchaum in the rough state, pipes in all stages, from the rough block to those finished and mounted. Besides many other fancy articles, all manufactured in this State.—Awarded a Diploma.

R. G. Gelin has a fine display of snuff, tobacco and cigars, of home manufacture, but being entered after August 15th, the Committee could take no action.

(Signed)
F. Crowell,
H. Sutliff,
Chas. Babb,
Geo. W. Inslee,
J. Carmen.

CLASS 30—SECTION 2.

To the Executive Committee of the Mechanics' Institute.

Gentlemen :—The Committee appointed to examine and decide on the comparative merits of the various specimens of wax and hair work now on exhibition, have completed their tasks (no light one when there is so much of nearly even excellence). Having carefully examined every article in Class 30, Sec. 2, we recommend that the awards of the Society be given as follows :

To Mrs. M. E. Gerrish, for the finest "Autumn leaves" on exhibition, a Silver Medal. —Awarded a Silver Medal.

To Mrs. M. E. Gerrish, for the best display of wax flowers, first premium.—Awarded a Diploma.

To Miss Marion Blanchard, for the most beautiful wax vase, first premium.—Awarded a Diploma.

To Mrs. J. W. Thomas, for the finest case of fruit in wax, and a wax cross, first premium.—Awarded a Diploma.

To Mrs. J. B. Harmstead, for a case of very fine wax shells, and several wreaths of natural flowers, pressed in wax, first premium.—Awarded a Diploma.

To Mrs. Hageman, for one vase of very fine wax flowers, second premium.—Awarded a Certificate of Merit.

To Miss Marion Blanchard, for a case of very fine specimens of wax flowers and Autumn leaves," second premium.—Awarded a Certificate of Merit.

To Mrs. Benj. F. Haynes, for a very neat vase of wax fruit, second premium.—Awarded a Certificate of Merit.

To Mrs. J. B. Fish, for wax flowers, a Certificate of Merit.—Awarded a Certificate of Merit.

To Mrs. W. C. Wilson, for wax cross, a Certificate of Merit.—Awarded a Certificate of Merit.

To Mrs. J. C. Rogers, for superior finish of work, special notice.—Awarded a special Certificate of Merit.

Miss Alice Schmidt is justly entitled to special notice for a neat vase of wax flowers —Awarded a Certificate of Merit.

HAIR WORK.

The Committee, in view of the excellence of the work, award to Miss J. E. Warren, first premium.—Awarded a Diploma.

To Mrs. L. Schuck, for hair cross, second premium.—Awarded a Certificate of Merit.

To Mrs. De Lebarr, for a fine wreath of hair flowers, a Certificate of Merit.—Awarded a Certificate of Merit.

To Mrs. H. E. Bert, for hair bouquet, honorable mention.—Awarded a Certificate of Merit.

HUMAN HAIR.

For the finest display and the most excellent specimens of art, to Mrs. M. E. Dougherty, first premium.—Awarded a Diploma.

HAIR REJUVENATOR.

For samples exhibited by Mrs. C. M. Chapman, we award Diploma.—Awarded a Diploma.

(Signed)
Mrs. James Dubois, Chairman and Secretary.
Mrs. S. H. Harman,
Mrs. A. Dam,
Mrs. W. H. Gladwin,
Mrs. Frank D. Morrell.

CLASS 30—SECTION 3.

To the Executive Committee of the Mechanics' Institute Fair.

GENTLEMEN:—Your Committee report that they have examined the stuffed birds and animals exhibited by E. F. Lorquin, being the only ones on exhibition, can make no comparison, but the beautiful workmanship of the above specimens and especially the vase of California birds, in the opinion of your Committee, deserve a Silver Medal. —Awarded a Special Diploma.

We also mention the self-sustaining aquarium by the same gentleman.

Also examined the beautiful specimens of sea moss and shell work by Mrs. Lorquin, and we are of the opinion that they deserve a Diploma.—Awarded a Diploma.

The French tower of shell work, by Mrs. L. Bigley, deserves a Diploma.—Awarded a Diploma.

A shell frame and sea-weed work, Mrs. Mariareno, deserves a Diploma.—Awarded a Certificate of Merit.

Galvanized birds, fruit, etc., by G. Kustel, deserve a Diploma.—Awarded a Diploma.

We make honorable mention of three cases of shells, by Mrs. W. P. Day.—Awarded a Certificate of Merit.

Also of five cases of shells, by Master George Bloomer. —Awarded a Certificate of Merit.

Cases of curiosities and shells from the Sandwich Islands, by W. E. Loomis, are worthy of notice.—Awarded a Certificate of Merit.

One case of walrus tusks and sperm whale teeth, beautifully engraved, by M. S. Finney, deserves a medal.—Awarded a Diploma.

Four walrus tusks, by W. Ryan.

(Signed) ABRAHAM WARNER,
CHAS. STEDMAN.

REPORT OF THE COMMITTEE ON MISCELLANEOUS ARTICLES.

CLASS 30—SECTION 4.

E. Hawthorne exhibits a patent fire escape, which is well adapted to a quick and safe exit of persons from the upper stories of hotels and other buildings, when the flames have cut off other means of escape.

Your Committee would recommend this device as worthy of a Silver Medal.—Awarded a Diploma.

J. C. R. Fairweather presents for exhibition a model of a "flying machine," but in so crude and imperfect condition that it is impossible for your Committee to judge of its merits at all.

John Whitman exhibits two pairs of elk horns of large size.

H. Engle has on exhibition the jaws of a shark which was lately captured in the waters of the southern coast and is said to have been for a long time the terror of the native pearl diver in that locality.

Dr. J. P. P. Vandenburgh exhibits several jars of tape worms skillfully taken from his patients by a new process, which he claims to be superior to every other method yet discovered for the purpose.

A case containing a large variety of samples of perfumery and fancy articles exhibited by J. W. Nagle.—Awarded a Certificate of Merit.

The soda fountain placed in the Pavilion by E. H. Willis to draw from as a profit, no particular merit claimed by the exhibitor.

Convenient devices for advertising business houses by Messrs. Gilmore & Van Norden, and Messrs. D. M. Hawley & Co.

Swyney Smith, fountain fleet, consisting of a fleet of sails placed on a circle around the central jet of the fountain and rotated by the action of the water. This clever device was exceedingly admired and added great novelty to the fountain. Your Committee deem it worthy of a Diploma.—Awarded a Certificate of Merit.

Governor Haight exhibits for the State of California a Silver Medal awarded to the State of California at the Paris Exposition of 1867 for Cereals, showing the appreciation of the Emperor Napoleon for the products of our young and rapidly growing State, and is a fitting testimonial.

John S. Hittell's "Resources of California." Three books. This book is a very interesting work, is carefully written and shows a marked observation of the adaptation of the soil in the various localities to the different products, the climate changes in the several localities of the State, and should be read by all old residents and particularly be carefully perused by all new comers to enable them the better to select a place of residence. The material from which the book is made was wholly manufactured in California. Your Committee deem the same worthy of a Silver Medal.—Awarded a Diploma.

The covering of a sofa showing a partial renovation of the upholstery by a patent process by J. C. Bender, presents a marked and wonderful effect for restoring colors that have been lost. Your Committee would recommend a Diploma to the exhibitor. —Awarded a Diploma.

Meyer & Co., exhibit samples of woollen blankets cleaned by a patent process, ; so well and perfect are these blankets reclaimed that the difference between them and the new blankets is not distinguishable. We deem this worthy of a Diploma.—Awarded a Diploma.

J. T. Jennings placed on exhibition a snuff box made of a piece of wood taken from a bridge built in England by the Saxons in the year 1176. The box was made by the exhibitor 43 years ago, and is a valuable relic.

Skull of a sea horse placed on exhibition by Dr. R. J. Perrin.

Combination swimming apparatus and life preserver, a very good device for the purpose designed, placed on exhibition by H. Olsen.—Awarded a Certificate of Merit.

Castle made of cards, by L. P. McCarty, shows considerable skill and taste and Oriental architecture, a large degree of patience and the application of a large number of playing cards to a useful and very ornamental purpose. We deem this exhibit worthy of consideration.

Mr. J. Stapleton exhibits an interesting autograph letter, and a note of hand by General George Washington. The letter is dated at Philadelphia, December 15, 1793, and the note bears date August 1, 1799. These relics show a remarkable state of preservation, and are valuable mementoes of the easy and affectionate style of composition which ever characterized the Father of his Country.

Indian stone mortar and pestle used for grinding acorns, and which was found five feet below the surface of the ground near Kelsey, El Dorado county, exhibited by C. W. Buteer. The same person exhibits several pieces of Continental paper money.

(Signed) C. W. M. SMITH,
CHAS. R. STEIGER,
Judges of Award.

INVENTOR'S MEDAL.

It being deemed of great importance to stimulate inventive talent by awarding to it special recognizance, the Board of Managers of the Sixth Industrial Exhibition of the Mechanics' Institute offered a Gold and Silver Medal respectively, to the first and second best or most valuable inventions exhibited, the same to be made without reference to awards decided on by other Committees. For this purpose a Committee was appointed of some of the most eminent practical and scientific gentlemen to be found in the State, who, after careful examination of the merits of inventions submitted to them for decision, made the subjoined award. One peculiarity and a most gratifying one to the Board of Managers, which arose from the appointment of this Committee, is the confirmation of the best exhibits in their line which were reported on for their merits by other Committees, as will be seen by reference to the different classes in the Exhibition.

SAN FRANCISCO, Sept. 12, 1868.

To the Board of Managers of the Mechanics' Institute Fair.

GENTLEMEN :—Your Committee on California Inventions beg to submit the following condensed report :

For the special Gold Medal to the best California invention we recommend the Steam Plough exhibited by Messrs. Coffin & Standish. In it is represented a machine which in its application to the agricultural industry of this State will do more to develope our resources than any machine heretofore invented in California, and is well deserving of a place alongside of the labor saving reaping machine. The arrangement of the plough part overcomes a difficulty which has not heretofore been surmounted, viz., that of the engine being able to travel over the ground when plowing. We think it well deserves the highest special award which your Board can present. Awarded a Gold Medal.

Among the many useful ingenious and labor saving inventions which we have examined we present those we consider of the greatest importance for your consideration as being deserving of secondary special award.

A Glass Smelting Pot invented by Carlton Newman, the great object of which is to enable the manufacturer to make with economy all ordinary varieties of glass manufactured from one furnace. Awarded a Silver Medal.

A Crank Pin and Cross-Head Lathe, by Goff & Bishop, the object of which is to turn the wrist pins or cross-heads of steam engines, etc., which has heretofore been done by hand work in an imperfect manner. Its advantages are perfection of workmanship and economy.

A Combination Safety Lock, by W. C. Bussey. Its advantage is in the comparative impossibility of being opened by thieves or burglars.

A Friction Hoist, by J. B. Johnson. Its advantages are simplicity, efficiency, security, and of being under easy control.

The Anthrophotoscope, by F. E. Mills, the object of which is to exhibit to us our friends, etc., in a natural and life-like manner in such groups as we may desire, to better advantage than by any previous invention.

All of which we respectfully submit for your consideration.

JAS. SPIERS,
JOSEPH KINGOT,
M. GREENWOOD,
WM. T. GARRATT.

INSTITUTE GOLD MEDAL.

With a view of presenting additional inducements to persons having valuable manufactures, inventions or products, the Board of Managers of the Sixth Industrial Exhibition of the Mechanics' Institute, in 1868, made the following announcement.

"A Gold Medal, known as the Institute Medal, valued at $200, which will be awarded to that invention, industrial product or manufacture, which, in the opinion of the Judges will be of the greatest benefit and value to the people of California."

In accordance with this announcement, a Committe of Judges was appointed, consisting of some of the most noted intellectual and practical scientific gentlemen in the State, who made the following award :

SAN FRANCISCO, Sept. 11, 1869.

A. S. Hallidie, Esq., President of the Mechanics' Institute,

DEAR SIR :—The undersigned, a Committee appointed by the Managers of the Industrial Fair as "Judges of Award on the Institute Gold Medal which is to be awarded to that invention, industrial product or manufacture which in the opinion of the Judges, will be of the greatest benefit and value to the people of California," beg leave to report as the final result of their deliberations that they believe the Pacific Tannery and Boot and Shoe Company are justly entitled to the Gold Medal of the Institute in view of the excellence of their work, the immense advantage which the people of California derive from their manufacture and the benefit which is destined to accrue to the industrial interests of this State by the encouragement in its various forms of this branch of domestic enterprise.

Yours very respectfully,

F. F. LOW,
ROBT. B. SWAIN
JAS. POLLOCK,
J. M. ECKFELDT.

ERRATA. The Committee of Awards, appointed from the Board of Managers, have made the following changes in awards.

CLASS 1. Section 1. C. C. Bemis for improved grate bars.—Awarded a Silver Medal.

CLASS 1. Section 1. Eckert & Dettrick for oscillating Steam Engine.—Awarded a Silver Medal.

CLASS 12. M. H. Garland for cough drops.—Awarded a Diploma.

CATALOGUE OF ARTICLES

Exhibited at the Sixth Industrial Exhibition of the Mechanics' Institute of the City of San Francisco.

Class 1.

SECTION 1. Steam Engines, comprising Stationary, Marine and Fire, Locomotives; also Boilers and Improvements thereon. Judges: Wm. Burnett, Mont. Fletcher, J. Swyney.

22. S. C. Higgins, horizontal steam engine, made by an apprentice.

48. Robert Blair, horizontal steam engine, made by an apprentice.

104. J. L. Constable. new mode of generating steam.

112. Swyney & Smith, drawing of an improved horizontal engine.

211. C. H. Foster, model of California invented steam engine.

269. J. M. Greiss, model of California invented walking-beam engine.

57. Levy &. Haley, patent fire extinguisher.

109. Risdon Boiler and Locomotive Works, California made steel boiler.

144. Ætna Iron Works, 2 sets Bemis' grate bars, California invention.

145. Robert L Harris, two sets Carvalho's steam superheaters.

184. Howland, Angell & Co., two Hicks engines and boilers.

199. Detrick & Eckart, California invented oscillating engine.

292. H. B. Martin & Co., California invented oscillating engine.

298. R. Wells, equilibrium steam engine.

263. Henry Tripp, model of locomotive, in working order.

— McAffee, Spiers & Co., Christoffel & Booth's Patent Eliptic Boiler Scraper.

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SECTION 2. Motive Powers, comprising Air Engines, Eclectric Engines and all Motive Powers, Turbines, Water Wheels, Windmills, etc. Judges: Joseph Moore, Geo. K. Gluyas, Wm. McKibben.

285. Attwood & Bodwell, California invented windmill.

183. E. O. Hunt, windmill model.

365. W. J. Tustin, windmill.

Class 2.

SECTION 1. Machinery for Working Metals. Judges: B. P. Brunner, E. T. Steen, D. B. Hinckley.

81. Formhals, hydraulic blower.

114. Goff & Bishop, California invented crank-pin and crosshead lathe.

189. Marsh, Pillsbury & Co., fan blower.

353. N. Lumsden, California invented apparatus for making screwed boots and shoes.

354. Attwood & Bodwell, model of self-lubricating journal.

2. Peterson & Jones, patent spring hammer. California invention.

64. Wm. Rudolph, patent turning lathe.

136. J. Dougherty, self-regulating thread-cutting machine.

169. C. F. Robinson, Rose's patent tire upsetter.

197. J. S. Detrick, eccentric chuck.

200. Kittredge & Leavitt, one punch and two pairs shears.

170. Hughes, Kimball & Co., one tire upsetter.

340. Andrew Spaulding, watchmaker's lathe.

19. D. E. E. Winchell, Roger's portable forge.

5. A. S. Hallidie, machine for making wire rope, California invention.

— Nelson & Doble, drilling machine.

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SECTION 2. Machines for Working Woods. Judges: D. A. McDonald, Wm. N. Miller, C. W. Thomas.

137. F. A. Huntington, shingle machine.

190. I. H. Small, planing machine.

209. J. W. Alesworth, machine for beveling barrel staves.

384. James Hatch, guards and guides for molding, California invention.

157. Jas. Hatch, improved morticing chisel, California invention and patent.

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SECTION 3. Agricultural Machinery. Judges: W. C. Bartlett, Rev. Horatio Stebbins, C. L. Lowe, R. B. Woodward, Samuel Dinsmore.

262. Coffin & Standish, California invention steam plow.

280. J. Marquis, model of steam plow.

6. J. & J. Ingham, San Jose, gang plow.

51. F. V. Lamb, vegetable root cutter.

141. M. C. Hawley & Co., agricultural implements.

142. Hawley & Co., three clipper mowers.

171. A. Hunter, grain separator, California invention.

176. Ed. Kimball. gang plow.

182. D. Winter & Co., combined seed-sower and cultivator.

185. Baker &. Hamilton, sweepstakes gang plow, etc.

212. W. H. Weister, Randall's patent sulky rake.

212. Baker & Hamilton, combined Shaker reaper and mower.

265. Dexter & Lambert, California made cultivator.

305. A. Hunter, rake, hay and grain-loading machine.

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SECTION 4. Miscellaneous and Manufacturing Machinery, etc. Judges: J. Spiers, Robt. Carlisle, N. W. Spaulding.

65. Pacific Woollen Mills, machine for knitting socks, drawers, shirts, etc.

233. Wm, Lyne, machine for picking hair.

4. J. Spaulding & Co., carpet-beating machine.

15. Robert Hewston, self-generating gas machine.

47. Pioneer Woolen Factory, fancy loom.

134. Geo. E. Butler, family knitting machine.

178. J. Newman, silk loom.

Class 3.

SECTION 1. Machinery for Mining, Tunneling, Metallurgical Processes; Crushers, Stamps, Grinders, Pulverizers, Amalgamators, Concentrators, Furnaces for Roasting; Hoists, etc. Judges: Jos. Moore, M. Attwood, R. Watt.

19. Mrs. E. J. Hall, drawing of patent smelting furnace.

108. A. Herdlein, model of improved stamp mill.

199. G. H. Leland, model of improved quartz battery and screen.

12. Vulcan Iron Works, Moore's patent hoist.

300. J. W. McKenzie, patent self-adjusting truck for flag staffs.

83. J. B. Johnson, patent California invented friction hoist.

131. J. Hendy, two improved concentrators.

135. A. M. Burns, Slusser's self-loading excavator.

159. Miners' Foundry, Howland, Angell & Co., McAuley's rope hose covering.

189. W. H. Hepburn, California invented amalgamators.

193. Hinkle & Capp, grinder and amalgamator.

201. J. C. Kernan, concentrator.

338. Varney & Rix, rock crusher.

373- Dewey & Co., for John A. Collins, model of amalgamator.

375. Thos. Varney, amalgamator, with improvements,

385. John A. Collins, oscillating quartz crusher.

29. V. Smith, new principle quartz mill.

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SECTION 2. Pumps, Hose Pipes, Nozzles, Couplings, Apparatus for burning Petroleum, as Steam, Fuel, etc. Judges: D. E. Hayes, Chas. Elliott, Geo. Fogg.

26. V. Cushing & Co., Excelsior double acting force pump.

45. G. Munson, California submerged pump.

78. G. M. Gerrish, submerged pump.

180. L. D. Craig, globe hydraulic nozzle and coupling, California invention; combination hair cutting shears.

183. E. O. Hunt, three California patent pumps.

280. Vulcan Iron Works, centrifugal pump,

292. H. B. Martin & Co., force pump. California invention.

297. M. D. Lasswell, force pump, etc.

310. A. J. Smith, Hudson pump.

361. W. D. Hooker, steam pump, California invention.

383. Ætna Iron Works, patent steam pump, Dunbar's self-adjusting steam piston packing.

41. David Stoddart, Cameron's steam pumps, governors and injectors.

Class 4.

Models of Vessels, etc., Tackles, Rigging and General Improvements, including Hemp and Metallic Cordage. Judges: J. M. Selden, A. T. Fletcher, A. M. Westervelt.

4. Tubbs & Co., California made rope.

8. A. E. Larssen, models of vessels.

14. T. F. Mitchell, California made blocks and sheaves.

45. H. A. Jacobsin, model of vessel.

64. George Howes & Co., model of "Young America."

96. W. T. Herrick, model propeller.

111. J. Shunhoff, model steamboat (tin).

116. A. Wingard, model patent steamboat wheel.

117. T. B. Roche. patent swivel shackle, California invention.

250. F. Desbarbieux, plaster model of propeller.

252. J. Franklin. model of ship.

265. W. M. Ryan, model of vessel, and carved walrus teeth.

270. E. C. Rowe, ivory model schooner.

333. Mrs. A. Rodgers, model of steamship "Zoe."

375. L. T. Lewis, model of merchantman.

30. Gustavus Jessen, model of "Shubrick."

123. E. T. Barlow, patent anchor and chain.

207. N B. Adams, two combination boat-detaching blocks.

244. William Rumwell, model of ship.

254. J. C. Cousins, two models of boats.

273. John Daly, model of schooner.

360. R. L. Ogden, model of yacht.

41. S. Marion, model of ship.

24. Captain Wylie, steamship and model of ship.

38. J. E. Thayer, four models of ships.

Class 5.

Military Engineering, Armor, Accoutrements, Ordnance, Small Arms, Tents and Camp Equipage, Gunpowder and other Explosives, Matches and Fireworks. Judges: S. E Ellis, H. E. Pippy, J. J. Haley.

33. Church & Clark, California made fireworks.

132. William Rudolph, 1 case arms, etc;, California make and invention.

137. Pacific Powder Mills, California made powder.

146. Snyder & Browning, case gun material.

290. San Francisco Percussion Match Company, California made matches.

113. William H. Jessup & Co., California made matches.

225. California Powder Works, California made powder.

262. Pioneer Fuse Company, California made fuse.

368. Giant Powder Company, samples Giant powder.

Class 6.

Civil Engineering and Architecture, and other building contrivances: Sanitary and other improvements; Architectural, Railroad and Bridge Drawings. Judges: George Gordon, H. C. Macy, Col Bulkley.

37. Swyney & Smith, drawing of Hallidie's patent wire suspension bridge.

359. H. Lombard, patent chimney top.

369. W. H. Haynie, patent hop kiln.

60. William McKibben, metal sewer bell or valve.

251 1-2. William O. Murtha, patent chimney top.

175; F. J. Davenport, redwood railroad tie and post.

303. Dr. Beers, improved railroad car.

333. Charles Darber, section of foundation of railroad bridge post.

336. J. W. Pearce, model of inclined track for mines.

393. A. H. Hale, W. L. Washburn's patent self-regulating railroad-car ventilator.

Class 7.

SECTION 1. Philosophical and other Instruments and Processes in which they are used, Mathematical Instruments and Balances, Nautical and Engineering Instruments. Judges; Sherman Day, William Schmolz, Herman Shussler, E. H. Dyer.

197. T. Houseworth & Co., optical goods.

330. J. Roach, mathematical instruments.

41. Fire Alarm Telegraph Company, telegraph instrument.

43. Lundberg & Marwedel, fire-alarm and telegraph instruments.

222. California Business Universty, telegraph apparatus.

246. Pacific Business College, telegraph apparatus.

69. Fairbanks & Hutchinson, scales and money drawer.

86. F. H. Pratt, adjustable scale column. attached to Fairbank's scale.

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SECTION 2. Surgical and Dental Instruments, and Dentistry in all its Branches. Judges: Dr. James Blake, Dr. H. Austin, Dr. C. C. Knowles.

74. G. W. Cool, dental goods.

89. D. S. Hutchinson, dental goods.

90. H. W. Calvert, dental goods.

143. Drs. Cogswell & Woodward, dental goods.

198. J. Jewett, Palmer's patent leg.

10. Dr. A. Folleau, orthopedical instruments.

50. M. M. Cook & Son. artificial legs, California made.

95. E. O. Belle, apparatus for extracting teeth, and case of dentistry.

99. A. W. Calder, dental goods.

302. Dr, J. C. Jessup, dental goods.

Class 8.

SECTION 1. Plain and Ornamental Castings Stoves, Safes, and Wrought Iron Work;

Shutters and General Blacksmithing Work. Judges: I. M. Scott, Charles Steiger. J. R. Sims, J. G. Ils, H. S. Smith.

124. M. Grogan, sample California made horse shoes.

283. Misgill & Cooper, sample California made horse shoes.

309. Betts & Fookes, buggy springs, California made.

71. Pacific Rolling Mills, California forging samples.

68. D. Jones, 3 sets axle-trees.

257. Pacific Rolling Mills, samples California forging.

372. Vulcan Iron Works, perforated grate bars, friction pawl, etc.

306. W. S. Kellum, spiral buggy springs.

281. W. N. Hendry, first piece casting ever made in California.

274. Tay, Brooks & Backus, cooking stoves, etc.

266. John Bohn, stoves, etc.

235. L. Chellis, two house safes. California made.

200. Kittredge & Leavitt, monitor safe, California made.

187, A. C. Taylor, stoves, sink and portable range, California manufacture.

156. Holbrook, Merrill & Co., stoves, etc.

315. M. B. Bullard, petroleum stoves.

339. T. C. Walter, model of range.

348. J. B. Owens, stoves, coal oil, lamps, etc.

118. ————Cronk's self-condensing steam cooking apparatus.

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Section 2. Tools, Saws, Hardware, Cutlery, etc; Locks, Keys, and other Fastenings, and Wire Goods. Judges: J. Hewston, Jr., A. A. Louderback, Walter N. Hawley, J. McGill, John Dixson.

27. B. L. Stone, patent burglar alarm.

13. F. Schoener, spoon metal, California made.

83. D. F. Barrows, patent window springs, Jenks' patent.

133. C. Otto & Co., machinists' tools.

153. O. B. Oakley, door plates, bell hangings, etc.

186. M. Price, California made cutlery.

208. Boone & Lumsden. samples sail needles, California invention.

214. N. Hoffman, California made flower stands.

220. S. M. Briggs, California invention, mitre box.

256. Carl Hein, California made carving tools.

297. Pacific File Works, California made files.

340. V. T. Wilbert, patent safety hook.

346. W. C. Bussey, improved combination safety lock.

3. H. T. Graves, samples of wire goods and weather strips.

21. J. A. Hoffman, shutter holder.

23. H. J. Booth & Co., quartz, slot and grain screens.

46. Will & Finck, cutlery and surgical instruments.

49. V. S. W. Parkhurst, combination locks and patent money drawer.

52. W. A. Sublett, improvement on window supporter.

Class 9.

Glass, Pottery, Clayware, Glass-Blowing, Cutting and Coloring, Fire-Brick and Fire Proof Ware, Brick, Tiles and Cement. Judges: Leon M. Kellogg, James Harris, R. H. McDonald, N. P. Langland, Isaac C. Davis.

343. Menant's Asphaltum Co., new lot of asphaltum.

347, Benicia Cement Co., Benicia cement.

11. R. A. Swain & Co., China ware and fancy goods.

14. San Francisco Glass Works, California made glass.

82. Pacific Glass Works, California made glass.

107. Golden State Pottery, California made pottery.

196. Pacific Concrete Co., side-walks, drain pipes.

230. Skinner & Flick, Excelsior sanitary pipe, California made.

382. Knapp & Grant, Roman cement.

10. Haynes & Lawton, glassware.

11. R. Mills, stained glass.

324. Noble & Gallager, embossed glass.

103. Thomas O'Neil, ornamental cut and ground glass.

76. John Mallon, ornamental cut, ground and stained glass.

130. Robt. Mills, embossed work on glass.

Class 10.

Section 1. Native and Foreign Wood, Sawed Timber or Lumber, and its uses; Carpenters' (House) and Joiners' Work, Scrolling, Turning. Moulding, and Carving. Judges: James Easton. B. H. Freeman, N.P. Langland.

51. Blythe & Wetherbee, 1 stick Puget Sound timber (outside pavillion).

226. I. E. Thayer, California laurel wood.

231. J. Perkins, veneer and wall hangings.

282. A. Cameron, wood and ivory fruit basket.

291. C. Wulbrun, wooden puzzles.

136. Shepherd & Carroll, California made lasts.

368. I. E. Thayer, 1 stick California laurel outside pavillion).

386. J. G. North, 1 stern-knee (outside pavillion).

1. H. E. Perry, model of wooden pavement, California invention.

38. J. W. Linsely, hat and wig blocks.

96. P. Gibot, spiral staircase, model.

224. A. E. H. Sturcken, improved window frames.

228. C. Romer, California polished wood.

168. P. H. Fluek, anatomical last.

315. Spurdger & Knowland, California sugar pine planks.

341. James Behrens, tesselated pavement.

133. Bryant & Strahan, carved side board.

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Section 2. Casks, Barrels, Kegs, Tubs, Pails, etc.; Brushes, and Willow and Woodenware. Judges: P. M. Bowen, T. F. Neagle, Alex. Murdoek.

55. Figer Bros., California made brushes.

129. Miss A. W. McClelland, Peterson's patent washing machine.

131. Feldmann & Co., California made brushes.

141. G. A. Jones, washing machine.

144. M. Zan & Co., California made brooms.

183. Elam & Howes, California made wooden-ware.

266. Mr. Coleman, patent atmospheric churn.

342. G. E. Wenzell, California cask and oak.

5. C. W. Weston, cider presses.

12. Thurnauer & Zinn, willow and wooden-ware.

19. Morrison & Holland, Dixie washing machine.

22. J. Vail, 1 washing machine.

51. F. B. Lamb, Pioneer washing machine.

63. Pacific Barrel and Keg Co., California made barrels and kegs.

114. P. Rasmunson, California washing machine.

140. California Wine Cooperage Company, California made wine casks.

240. J. S. Hittell, Poor Woman's Washing Machine.

213. Florent Eek, 2 tubs, 2 wooden pitchers.

267. H. Lundie, Wolverine washing machine.

377. J. N. Seeley, churn, wringer, etc.

28. Mrs. A. D. Waldron, "Wooden Washerwoman."

Class 11.

Minerals and Mineral Substances, Coal, etc. Judges: L. M. Kellogg, O. W. Easton, Melville Attwood.

46. North Star Gold Mining Co., specimens of ores and map.

123. G. Kustel, five cases mineral specimens.

271. D. E. Cotter, specimens from the Sandwich Islands.

204. Redington & Co., electro-silicon.

350. G. L. Wratten, electro-silicon.

205. M. Lane. silver ore from North Star ledge.

312. M. W. Baldwin, copper ore, Arizona.

335. Thos. C. Cave, quartz from Morning Star ledge, Nevada.

359. M. Seott, copper, silver and gold ores from Alpine County.

387. Oregon Iron Company, samples of iron ore.

Class 12.

Chemical and Pharmaceutical Manufactures. as Alkalies, Acids, and all other manufactures and processes, Pharmaceutical substances and processes of production. Judges: Dr. James Blake, James Steele, Thomas Priee, Arch, Cooper, E. T. Martin.

42. Mrs. H. T. Wood, 1 box patent ointment, California manufacture.

196. Crane & Brigham, case of California sulphate of copper.

253. A. T. Cooper, samples veterinary medicines.

258. Bay View Chemical Works, samples California made sal soda.

383. M. H. Garland, patent cough drops.

91. Dr. G. B. Tolman, one case chemicals. California manufacture.

31. S. Adams & Co., one case California made inks.

7. Standard Soap Company, one case chemicals.

Class 13.

Jewelry, Silver and Plated Ware, made of Precious Metals, and their imitations; Precious Stones, Lapidary Work, Gold Pens, Hair Jewelry, Plated Ware and Galvanized, Plastic, India Rubber Jewelry, etc. Judges: F. B. Hart, B. P. Avery, Job M. Seamans, O. Gori, W. T. Garratt.

115. John Martell, silver-plated coach material.

132. Vanderslice & Co., two cases California manufactured silver ware.

158. P. A. Giannini, three gold watches in Vandersliee cases.

170. Mrs. C. Cook, two cases hair jewelry.

228. F. Hollander, California invented watch alarm.

235. San Francisco Plating Works, plated ware, California manufacture.

267. Com. T. H. Allen, silver speaking trumpet.

307. C. H. Hain & Co., two cases silver ware, etc., and clock.

390. Wm. Lyneh, silver shield, coat of arms of Ireland and America combined.

24. H. Wenzel, one clock, California manufacture.

55. Braverman & Levy, two cases conaining silver ware.

181. Mrs. B. Uszynski, case of hair jewelry

216. F. Heinze, one universal clock.

219. C. E. Colilns & Co., one clock, California manufacture.

325. W. H. Lamb rachet for watches and clocks.

195. R. F. Rocchiccoli, silver-plated and gided goods.

10. Haynes & Lawton, silver and plated ware.

43. Mrs. Bolander, hair jewelry.

153. O. B. Oakly, silver plating, silver ware. etc.

Class 14.

Lithography, Engraving, Ornanental Printing, Book Binding, Ornamental Boxes, Printing Material, Paper, Penmanship. Judges: Jacob Bacon, J. J. Rey, E. Bosqui, H. H. Moor, James Linch.

16. F. E. Beck, specimens of penmanship, Lord's prayer.

17. P. Espnia, San Jose, specimens of penmanship.

20. C. E. Wolf, map drawn with the pen.

12. California Business University, specimens of penmanship.

24. F. M. Truworthy, specimens stencils cutting.

36. J. B. Grouppe, wood engraving by boy 15 years old.

125. G. B. Hitchcock & Co., California made books, etc.

134. G. M. Wood, specimems of stencil.

193. J. P. Upton, specimens card printing.

287. Cubery & Co., specimens printing and frames.

293. L. M. Fernandez, specimens of penmanship.

374. H. Page & Co. samples of monograms.

120. J. Breidenstein, jewelry boxes and fancy ornaments.

322. J. M. Rice, paper made, in Sandwich Islands.

329. E. S. Colburn, two pictures executed with a pen.

334. A. Mussard, four goblets, samples of engraving on glass.

345. Pacific Business College, specimens of penmanship.

370. T. Sargent, lithograph picture.

12. Snow & Roos, engraving.

15. W. V. Gray, lithograph of San Francisco and key.

20. A. Foreman, Foreman's improved type machine, California invention.

23. Wm. Faulkner & Son, type-casting machine.

32. Palmer, Knox & Co., printing press and inking machine.

67. Wm. Wallace, fancy penmanship on cards.

74. H. H. Bancroft & Co., pulications and patent ink.

97. T. M. Cash, one printing press.

112. J. G. Hodge & Co., stationery.

126. Frank G. Edwards, machine for manufacturing wall paper.

138. S. P. Taylor, California made paper.

211. Teubner & Hoffman, jewelry boxes.

231. J. Girvin, paper quilt from Sandwich Islands.

225. S. Whitney, set California Reports

270. Miss A. W. McClelland, wood engraving.

309. H. C. Bateman, one case Bibles.

311. Mrs. B. V. Michals, one pen drawing.

321. J. T. Bardwell, 1 lithograph.

332. Geo. B. Hitchcock & Co., copying presses, California made.

Class 15.

Wagons and Carriages, etc. Judges: H. M. Newhall, John W. Farran, H. W. Byington, H. M. Black, F. Kohler.

154. A. Folsom, buggies and wagons, California made.

273. G. P. Kimball & Co., buggies and wagons, California made.

84. C. A. Fargo, patent brake and wagon.

200. Casebolt & Kern, four buggies.

256. J. H. Arnold, adjustable carriage pole.

294. Charles A. Way, velocipede, California invention.

322. Moor & Edwards, buggy, with an attachment to prevent horses from running away.

346. Deitz & Co., buggy shackle.

366. F. A. Huntington, buggy.

374. Gallagher Bros., butcher cart.

Class 16.

SECTION 1. Harness and Saddlery. Judges: W. H. Baxter, J. B. Dorr, Josiah Swain.

312. Main & Winchester, Saddlery and Harness.

316. J. Hamilton, circus performer's saddle.

80. Main & Winchester, harness, robes, whips, etc.

130. G. Vellengar, saddles in case.

153. F. T. Houghton, side saddles.

323. A. P. Beatty, San Jose, one bullion bridle.

98. M. M. Cook & Son, California made collars.

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SECTION 2. Boots, Shoes and Leather. Judges: J. C. Johnson, T. R. Hayes, J. B. Roberts.

32. Co-operative Union, California made boots and shoes.

180. P. Kelley, California made boots.

234. W. F. Burke, California made boots.

247. L. Price, California made boots.

279. William Bloom, California made sheep-skins, alum tanned.

380. Mrs. S. F. Kendrick, Chilcott's patent flexible boots and shoes.

119. L. Hoffman & Co., California tanned calf and kip skins.

119. Pacific Tannery and Boot & Shoe Co., Califronia made leather and boots and shoes.

248. Tyler Curtis & Co., California manufactured leather.

290. Wentworth, Hobart & Co., California manufactured boots and shoes.

351. Buckingham & Hecht, California manufactured boots and shoes, and wire quilting machine.

—— A. H. Hale, Hill's patent elastic inner soles.

SECTION 3. Hose, Trunks, Valises, Carpet Bags. Leather Buckets and Fire Caps. Judges: Wm. Sherman, W. S. Phelps, F. E. R. Whitney.

98. M. M. Cook & Son, fire hose and belting.

67. Heuston, Hastings & Co., trunks, valises, etc.

72. E. Galpen & Co., trunks, valises and carpet bags, California made.

75. J. Pointer & Co.,trunks, valises, etc., California made.

164. H. Roger, leather belting and lacing.

191. J. J. Fulton, fire hose.

299. French & Co., trunks, etc., California made.

Class 17.

Signs, Wood, Glass and House Painting; Graining of Wood and Marble, Staining and Polishing Wood, Block Letters, and Engraved Signs on Metal. Judges: H. Kenitzer, C. E. Lang, H. J. Bloomer.

52. Hosrt & Visby, samples decoratinv painting.

165. J. W. Cherry, sign painting and block letters.

182. George A. Brush, samples of grained doors.

87. Wm. Patterson, metalic signs .

Class 18.

Plain and Ornamental Furniture, Inlaid Work, School Furniture, Desks and Show Cases, Billiard Tables, and Balls, and Works for Amusement. Judges: James Easton, A. Conard, Chas M. Plum, Geo. T. Grimes,J. O. Eldridge, H. Steinnigger, H. J. M. Trout.

23. Eureka Hair Co., two bales Eureka hair.

25. Wm. A. Byrnes, cricket and base ball bat.

35. Dr. C. Farno, checker-board table.

63. C. D. Hinckley, samples of wire and bed springs.

94. Moore, Westly & Co., California invented bed-stead (model.)

161. F. Dreyfellcher, inlaid box.

167. W. S. Torrey, bedstead, with California invented mattrasses.

176. Kruger & Slocum, two bedsteads with patent spring bed.

177. W. L. Torrey, three bedsteads and one lounge, patent spring.

232. L. Castagnino, California made furniture, inlaid.

251. E. Leisenfeld, two California made billiard tables.

246. Schlueter & Volberg, cornice and drapery of paper.

276. G. W. Sharp, one bottle sample of California pulu.

305. C. H. Jenkins, inlaid table.

324. C. Newbeia, laurel wood writing-desk

326. J. Boyce, one inlaid box.

337. Johnson & Best, secretary book-case.

367. E. Lany, nineteen black walnut brackets.

371. John D. Boyd, laurel furniture, California made.

376. T. Westly, model California patent sofa bed.

85. Goodwin & Co., California manufacfactured furniture.

89. Pacific Elastaic Sponge Co., samples elastic sponge.

148. W. Holt, school furniture.

151. McElwee & Ackerman, carpets curtains, etc.

155. S. Tonnar, rustic settees and chairs, pruning knives and wax.

166. T. J. Winship, inlaid box made on board "Shubrick."

172. G. Rolland, California made inlaid floor.

194. Strahle & Hughes, California made billiard table.

206. S. T. Damon, patent baby tender.

253. Wigmore & Palmer,cabinet furniture.

316. J, Beauchamp & Co., Eureka furniture polish.

343. N. P. Cole & Co., California made furniture,

79. J. D. Patrick, California invented bowling alley.

26. Phillip Hinkle, two folding spring patent bedsteads.

30. Jones, Wool, Whittier & Fuller, looking-glass and frames.

132. S. C. Bradshaw, Paysons's gymnastic swing.

——Snow & Roos, one carved and gold picture frame.

——James Lick, thirteen frames ornamental gilding.

Class 19.

SECTION 1. Work from Real and Imitation Stone, Marble, Plain and Ornamental Work; Emery, Polishing Powders, etc. Judges; Louis Larseneur, F. Williams, Wm. Patton.

150. S. Dinsmore, two inlaid marble top tables.

242. M. Heverin, two marble mantles.

143. Thomas Robinson, California grindstone, from Alameda County.

203. E. T. Steen, patent artificial stone California manufacture.

SECTION 2. Sculpture in Stone and Plaster, Works of Art, and Ornaments in Stone or Plaster of Paris; Castings, etc. Judges; Joseph Britton, B. R. Norton, O. Gori.

168. P. Mezzarra, busts in plaster, etc.

205, Arthur Lemmon, one bust and column.

201. P. J. Devine, one bust in marble, made by exhibitor.

54. R. H. Stretch, plaster model of Virgina City.

56. Sam'l Kellett, plaster ornaments.

238. A. Petanghi, "Sleeping Child," in marble.

Class 20.

Oil, Soap, Candles, Whale, Lard, Sperm, and Fat, and Animal Oils; Linseed Oil, Olive Oil, Caster Oil, Turpentine, Pitch, Tar, Resin, Candles, Soap, Petroleum Oils, Paints, and Colors, Judges: R. H. McDonald, Charles Langly, J. R. Deane, W. B. Swain, W. R. Cranna.

56. Pacific Oil and Lead Works, samples Cailfornia made oils.

92. O. A. Olmstead, mineral paints, from Sonoma County.

105. Epes & E. H. R. Ellery, patent India rubber paint.

185. J. B. Parsons & Co. Bowman's washing compound.

286. Whittier, Fuller & Co., neatsfoot oil and glue.

295. San Francisco Candle Company, California made candles.

7. Standard Soap Company, California made soap and candles.

16. J. Herkimer. California made blacking.

33. H. Lake, California made blacking.

53. Eureka Soap Company, California made soap.

59. C. G. Kelly & Co., washing fluid, etc.

188. John J. Hucks, axle grease.

289. Hill & Terreynes, California paint, etc.

300: G. Louis, California olive oil,

Class 21.

SECTION 1. Paintings in Oil and Water Colors, and Crayons. Judges: M. S. Latham, B. P Avery, Noah Brooks, F. B. Hart.

1. Emma Kraus, crayon drawing.

30. H. Burgess, ninety-seven crayon drawings.

71. J. Reynault, one picture by a child 14 years.

79. G. H. Burgess, water color painting.

84. Mrs. S. M. Brady, one oil painting.

98. Mrs. N. W. Hutchinson, two oil paintings.

110. C. Gullman, oil painting by girl 14 years of age.

118. J. W. Mahood, drawing of fish by girl 12 years of age.

119. Miss C. Mahood, drawing by girl 13 years of age.

147. Jas. A. Kerr, three water color paintings.

155. E. Schmidt, one water color painting.

156. L. Schmidt, one water color painting

159. W. H. Hilton, India ink sketches, "Arizona Life" and "Crossing of San Pedro River."

163. H. J. Frey, thirteen oil paintings.

169. G. Howes & Co., water color, "Viscata."

184. Wm. Blair, oil paintings.

194. Miss McKee, oil paintings.

221. Mrs. A. McHenry, three oil paintings.

238. Geo. B. Butler, six oil paintings (artist left handed, lost right arm.)

248. Nahl Bros., oil paintings.

272. H. W. Vaughan, oil and water colors and India ink portraits.

289. Jenkins, three oil paintings.

260. Miss Fannie E. Hawley, three pastel paintings.

304. F. S. George, two pastel paintings.

372. Miss G. Martense, one porcelain painting.

373. H. Fletcher, thirty assorted sketches and paintings.

376½. H. O. Young, oil painting, "Vernal Fall."

382. Mrs. H. S. Huntington, medley picture.

384. W. J. Hainey, twelve sketches of Alaska.

25. H. J. Booth & Co., three drawings of engines.

61. M. Bush, oil paintings.

94. G. H. Goddard, ten water colors.

102. Geo. Pardy, two drawings of engines

149. R. H. Stretch, map of Chollar-Potosi mine.

179. James Wise, eleven portraits in oil.

214. D. Ebbets, two pictures.

245. Miss Ivy Wandesford, one oil painting.

247. R. Winter, one oil painting.

249. R. G. Holdredge, one oil painting.

254. J. C. Cousins. two pictures of boats

260. E. Barron, oil painting, fruit and flowers.

261. E. Brodie, drawing of boat on lake

279. Agnes Pendergast, one picture.

284. J. B. Harmon, two drawings.

285. Otto Schrader Bros. twelve figures and sketches.

321. J. L. Bardwell, four oil paintings.

331. Wm. Dye, one oil painting.

347. Mrs. J. H. Holt, water color.

336. T. J. Winship, photograph of pencil drawings of the "Shubrick" and Shubrickville.

357. B. McQuillan, framed view of San Francisco.

369. Dr. J. H. Wood, two frame pictures.

3. Ernest Narjot, six oil paintings.

4. A. K. Kipps, two oil paintings.

8. D. H. Woods, fifteen oil paintings.

12. Snow & Roos, paintings.

14. Mr. Marple, four oil paintings.

22. K. E. Pope, two pictures.

27. Samuel M. Brooks, one picture and half portrait of a lady.

344. Reymon Aquirne, two framed crayon drawings.

2. Robert Samisch, porcelain paintings.

66. Mrs. J. W. Thomas, three paintings.

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SECTION 2. Photographic Views and Material. Judges: J. J. Rey, F. A. Barry, J. R. Jarboe, J. Mora Moss, J. B. Wandesford.

248. Nahl Bros., photographs.

50. N. M. Klain, fifty-eight photographic views.

66. Mrs. J. W. Thomas, three paintings.

—— Hutton & Kohler, drawing of San Francisco, recreation grounds, in water colors.

80. F. E. Mills, six autho-photoscopes, California invention.

325. Stratton Bros., photographs, moving of Mechanics' Hotel.

58. T. Houseworth & Co., stereoscopes and views of Pacific Coast scenery; forty-two wall pictures Yo-Semite and Mammoth Trees.

152. Dr. J. Streutzel, one potograph.

229. Bradly & Rulofson, photographs.

221. Pacific Iron Works, photographs of machine shop.

258. Miss Romances, photographs.

5. S. Selleck, twenty-six photographs.

6. W. V. Gray, six retouched photographs.

7. C. E. Watkins, sixty-two assorted photographic views.

13. Bayley & Cramer, eighty assorted photographs.

Class 22.

All Kinds of Musical Instruments. Judges: R. Herold, Geo. Pettinos, T. E. Smith, Otto Linden.

187. A. A. Rosenberg, two pianos and two organs.

190. G. Rudolf, two California made pianos.

191. C. Weiderhold & Co., one grand and one upright piano.

219. Jacob Zech, four California made pianos.

225. J. D. Patrick, California invention, piano "Pupils' Monitor."

268. John G. Dawes, California made flutes, etc.

218. J. T. Bowers, two pianos and four organs.

252. M. Lawton one small toy piano.

259. C. C. Keene, musical instruments.

Class 23.

Woolen and Mixed Goods, Knit Goods, and Cotton Goods. Judges: Peter Thompson, Jonas Adler, G. F. Walter, C. J. Jansen, H. N. Miller.

10. Mrs. E. T. Newton, one carpet and rug, made by hand.

41. Miss Mary Bowers, one worsted rug.

54. Mrs. E. Van Dueyne, case woolen work.

62. Miss A. Stewart, worsted afghan.

142. Miss P. Rothfelder. worsted afghan.

192. Alex. Mackay, six pieces California made carpet.

249. Mrs. T. King, knit bedspread.

35. Mission Woolen Mills, California made woolen goods.

65. Pacific Woolen Mills, California made woolen hosiery.

73. Marysville Woolen Mills, California made woolen goods.

328. Oakland Cotton Mills, California made cotton goods.

——Pioneer Woolen Mills, California made woolen goods.

Class 24.

Furs, Mens' and Boys' Clothing, Hats and Caps not made of Leather. Judges: T. Van Tassell, C. A. McNulty, H. M. Lockwood, Charles Nickerson, Saml. Bridges, E. Kenedy, Wm. Drury.

59. H. M. Heineman, neck ties, California manufacture.

68. J. DeBarr, umbrellas, California manufacture.

82. A. Lamott, hats and caps, California manufacture.

145. R. M. Adams, hats and caps, California manufacture.

206. H. Leibes & Co., fancy furs.

240. C. T. Blake, military goods.

254. K. Meussdorffer, hats, caps, etc.

261. Landrum, Butterfield & Son, cashmere goat skin and Cotswold sheep skin.

281. J. Figel, California made clothing.

317. S. Reinstein, California made clothing.

318. T. R. Johnson, military goods, etc.

349. S. Figel, California made clothing.

355. D. Norcross, California made regalia.

40. S. Appel, oil clothing.

44. J. Alsop, California made parasols.

77. Joseph Lancaster, domestic made clothing.

108. M. Esberg, California made shirts.

160. Joseph Bros., California made boys' clothing.

304. Wm. Clayton, two dog-hair overcoats from Alaska.

178. Ladies' Co-operative Union, shirts and clothing and dressing gown.

Class 25.

California Silk, and Articles made there from Silkworms and Culture. Judges: A. D. Bell, Geo. Huntsman, L. Sachs.

200. T. A. Garey, California silk cocoons.

161. J. Prevost, California silkworms cocoons etc.

178. J. Newman, silk, California manufacture.

239. J. Smith, Sacramento, cocoons, mulberry trees, etc.

241. I. N. Hoag, cocoons, mulberry trees, etc.

242. J. S. Harbison, mulberry trees.

396. A. F. Goddard, Sacramento, cocoons.

395. R. Williamson, two mulberry trees.

Class 26.

Dress making, Millinery and Fancy Goods. The Commitee will take no notice of Sewing Machines, or their work, or attachments in any way. Judges: Mrs. Captain Connor, Mrs. Henry Carlton, Mrs. P. Caduc, Mrs. H. M. Newhall, Mrs. J. B. Harmstead.

84. Mrs. S. M. Brady, two pieces crochet work.

6. S. Rosenblatt, dresses, shawls, etc.

31. Josephine Benheim, worsted boquet.

34. Mrs. C. S. Sullivan, embroidered and stamped goods.

39. Mrs. R. Kirwin, children's clothing.

43. Mrs. A. Bolander, embroidery and stamping.

47. Mrs. J. Hammersmith, two pair stockings footed by hand.

49. Miss J. Jacobs, worsted piece, "The Reaper"

53. Miss C. Goldstein, embroidered pin cushion.

65. Miss A. Good, silk quilt.

70. Miss E. M. Kingsley, embroidered piece.

72. Mrs. E. Linehan, patchwork quilt.

73. Miss A. Van Roun, counterpane and two table-covers.

76. Miss J. E. Greer, worsted ottoman cover.

77. Ladies Depository, ladies and childrens' clothing.

78. Mrs. E. Rudolf, embroidered piece.

75. Miss A. D. Baker, worsted piece.

86. Mrs. G. Mohrent, two bedspreads and one baby shawl.

99. Mrs. C. F. Brown, two worsted toilet sets.

113. T. Hentz, impression of perforated pattern, General Grant.

135. Miss Mary A. Hale, silk work bag.

148. C. Goldberg, ladies' hat flowers.

157. Clifford Schmidt, (master,) worsted pin-cushion, by child of five years.

160. Miss A. C. Hartman, embroidered picture of Lincoln.

172. Mrs. S. A. Kelsey, one piece velvet patchwork.

173. Miss S. M. Kelsey, patchwork quilt.

174. Golden City Straw Works, California made straw goods.

178. Ladies' Co-operative Union, children's underclothing.

179. Mrs. T. Winship, millinery goods.

202. H. Friedlander & Co., ladies' underclothing.

217. Mrs. Realhaupt, needle-work waist.

222. Mrs. M. R. Ball, gents' dressing-gown, and quilt.

224. Mrs. H. E. Bert, one quilt.

229. Mrs. J. J. LeMare, crochet tidies, etc.

336. Miss J. Columbat, embroidered mat and seed bag.

239. Mrs. E. Rassette, silk quilt.

241. Miss S. Smith, embroidered pillow.

143. Miss E. Tracy, tatting collar.

244. Miss C. A. Tabor, carriage robe and tidy.

245. Miss A. C. Tabor, tidy and piano cover in crochet.

246. Pacific Straw Works, California made straw goods and machine.

259. Miss A. Murphy, patchwork quilt.

274. Mrs. S. C. Shaefer. worsted work.

218. Mrs. S. C. Ewing, diagram for cutting dresses.

278. Mrs. D. A. Inwoods, diagram for cuting dresses.

292. Mrs. C C. Jones, two worked pincushions.

294. Mrs. Lafond, basket artificial flowers.

18. Mrs. A. W. Scott, frame preserved flowers.

40. John F. Snow, re-cleaned gloves and feathers, etc.

44. Miss F. McClure, Redwood City, phantom wreath.

164. Mrs. G. S, Harris, four frames flowers in feathers and seed.

175. B. Pasquale, embroidered slipper pattern.

188. Mrs. F. Gabriel, embroidered work in fish scales

215. Mrs. Geo. Atkinson, two leather picture frames.

216. Mrs. A. S. Knapp, one white spread and two table covers, made by hand, sixty years old.

303. Miss F. Breece, tatting parosol cover.

310. E. Blochman, millinery goods.

311. Mrs. Ackley, worsted rug.

313. Mrs. L. Bernard, worsted boot-jack,

320. E. E. Caswell, millinery goods.

323. Eliza Higgins, two worsted work ottomans.

327. Mrs. Ewing, silk quilt.

341. Miss A. J. Morton, worsted flowers.

352. Mrs. E. Campbell, embroidery.

357. Mrs. J. R. Paullin, rug made by hand.

358. Mrs. J. R. Paullin, worsted flowers.

362. W. Englander, California made cords and tassels.

363. Mrs. W. Donneley, crochet counterpane.

365. Miss F. Rothman, worsted picture, "Jacob's Despair."

366. S. A. Bonney, worsted picture, "Fishing Boat."

378. Claus & Co., artificial flower baskets.

379. Mrs. De La Bar, bed comforter, quilt, etc.

385. B. Pasquale. fancy goods.

387. Miss M. E. Gerlach, worsted sofa pillow.

388. Miss E. L. Churchill, worsted piece.

389. Miss F. R. Jacks, needlework collar.

18. Mrs. W. C. Wilson, needle work.

29. Mrs. M. A. Butler, millinery.

88. Mrs. J. C. Morrison, Jr., vase magnolia blossoms.

93. Madam Julia Winberg, worsted work.

117. Miss E. Girod, silk quilt, three wreaths.

125. Juliana Bayer, Sacramento, seventeen frames and pieces of raised embroidery.

127. Meyer, Jonasson & Co., cloaks, shawls, etc.

210. Mrs. Watson, knitted tidy and stockings.

227. Mrs. E. Crocker, baby skirt.

236. P. F. White, piano cover.

234. Mrs. J. Sweet, bed quilt.

243. J. H. Baird, worsted picture.

250. Mrs. Young, tidy for table, etc.

268. Miss Hefti, needle work and embroidery.

269. Miss A. Danielwitz, worsted wreath.

282. Mrs. Captain J. A. Johnson, embroidered afghan.

287. Mrs. W. H. Knight, corn bouquet.

292. Mrs. De Costa, quilt,

277. Miss E. McKee, two pieces embroidery.

301. Mrs. Barringer, Mrs. Curtis' improved method of cutting dreses.

308. Mary P. Cohn, worsted lamp mat.

314. A. P. Magendie, needle work.

318. Mrs. George Ellis, sea moss.

326. Mrs. Van Dursen, dress trimmings.

330. Mary Haviland, pencil sketch and wreath.

334. Charlotte Raw, needle work.

349. Mrs. Louis Fych, needle work picture.

352. Mrs. Wm. Parker, silk embroidery.

353. Madame W. Cohen, needle work.

354. Nellie Kull, crochet bedspread.

358. Mrs. Chas. A. Tabor, dolls, cradle and patchwork quilt.

362. C. M. Feliss, embroidered handkerchief.

371. Jacobs, Newman & Co., California made hoop skirts.

16. Mary Worth, vase worsted flowers.

17. Mrs. W. H. Russell, quilt.

29. Miss F. E. Gray, afghan.

32. Currier & Winter, seaweed.

33. Mrs. J. F. Clement, three tatting collars.

34. Mrs. S. E. A. Higgins, seaweed.

39. Mrs. W. A. France, quilt.

No premiums to be awarded on the following:

Grover & Baker, sewing machines and work.

Florence Sewing Machine Co., machines and work.

Singer Sewing Machine Co., machines and work.

Fuller & Co., Hancock sewing machines.

Bartram & Fanton, sewing machines.

H. A. Deming, Howe sewing machines and work.

Class 27.

Native, Foreign and other Distilled and Malt Liquors; Bitters, Syrups, Cordials, Essences, Punches, and Mixed Liquors. Judges: A. McNulty, Ralph Emerson, Judge Hoffman, J. Mora Moss, Henry Kenitzer, Dr. Carl Precht. A. J. Bryant.

15. F. & P. J. Cassin, California wine and brandy bitters.

26. C. F. Leiding, California Sonoma wine.

28. L. Tichner, California white wine.

60. Squarza's punch, A. Bona, California made punch.

97. J. R. Snyder, California made wine.

102. T. Pettinelli, California made wine.

103. G. Caterelli, California made Ricci punch.

126. Kohler & Frohling, California made wine and brandy.

137. Wertheimer & Waterman, California made bitters.

139. L. Gross & Co., California made bitters.

149. I. Landsberger, California made champagne.

151. Anaheim Wine Growing Association, California wine bitters.

213. M. Keller, California wine bitters.

223. J. Sajous, Calffornia real half-and-half.

288. J. McCaffray, demijohn port wine from Santa Barbara.

302. Buena Vista Vinicultural Society, California wine and brandy.

105. S. Marks, California ale and porter.

162. L. Garrand, Santa Clara, Norman' bitters, California made.

327. Whiting & Berry, domestic and foreign wines.

369. Dr. J. H. Wood, hock wine.

21. W. R. Doty, Sonoma white wine.

Class 28.

Flowers, Plants, Agricultural Products, Fruits and Vegetables, Butter and Cheese, and Agricultural Implements. Judges: J. H. Gillmore, —— Gray. H. K. Cummings, C. J. Pillsbury, S. S. Graves.

207. D. L. Perkins, sample seeds.

210. W. Holdredge, Blodget's improved road scraper.

257. J. Dodge. patent garden hoes.

301. J. C. Polhemus, Egyptian wheat.

381. T. Hart Hyatt, fruits, from Redwood City, and book on grape culture. The book is in the office of the Board of Managers, in the desk.

36. J. O'Hara, shrubs, plants and flowers.

81. J. V. Sims, fruits from Sacramento River.

105. Holland's orchard, Sacramento, fruits from Sacramento River.

106. Woodward's Garden, collection of choice plants.

177. J. Hutchinson, dahlias, hollyhocks, etc.

339. R. Kerchival, fruit from Sacramento River.

367. M. R. Miller, samples of foreign grapes.

381. Dr. H. Hale, lemons and plums.

18. Mrs. Rev. — Taylor, bean pod from South America.

23. California Sugar Manufacturing Co., sugar cane.

25. Thomas Vear, peaches.

35. Mrs. J. Lick, sun-flower, corn stalk, castor beans, etc.

Class 29.

Natural and Manufactured Products, Flour, Wheat, Grain, Wheat (seed) Bread, Crackers, Maccaroni and Paste, Spices, Mustard, Coffee, Preserved Meats. Fish, Fruits, Preserves, Vegetables, Pickles and Vinegar, Sugar, Candy, Syrups.

Judges: W. C. Bartlett, John Centre, Richard Rowland, C. L. Kellogg, M. P. Jones.

9. W. M. Boyd, California yeast powder.

61. H. Schammel, California vinegar.

69. B. F. Barton & Co., California saleratus, etc.

85. B. Ackerman, California extract of coffee.

87. E. J. Cummings, California preserves.

100. John Knoll, California mustard.

171. Boston Cracker Bakery, California made crackers.

203. Marden & Myrick, California made spices.

227. T. Donnolly & Co., California made yeast powders, etc.

275. Crystal Salt Works, California made salt, San Jose.

284. Ravenna, Ghiradelli & Co., California made maccaroni.

299. H. J. Clayton, California made salad dressing.

321. Boston Cracker Company, California made crackers.

361. San Francisco and Pacific Sugar Refinery, California made sugar.

70. Union Pacific Salt Company, California made salt.

101. Bernard Coffee and Spice Mills, California made coffee, spices, etc.

154. Pioneer Flour Mill, California made meal, etc.

251. Brignardello, Macchiavelli & Co., vermicelli, etc.

272. George Haas & Co., California made candies.

296. Holladay & Brenham, California manufactured salt, from Carmen Island.

37. B. F. Barton & Co., samples of Carmen Island salt.

394. T. W. McCollam & Co., codfish from Alaska.

Class 30.

SECTION 1. Cigars, Tobacco and Snuff. Judges; L. Crowell, Charles Babb, H. Sutliff, ——Casener, G. W. Inslee.

107. B. C. Horn & Co., samples tobacco and cigars.

121. Julius Morris, samples cigars, etc.

128. Joseph Groce, samples cigars, etc.

181. C. G. Emery & Co., samples tobacco.

237 Parker, Watson & Co., samples smoking and chewing tobacco.

360. Charles Kohlmann, California made meerschaum pipes, etc.

66. Son & Briggs, meerschaum pipes, etc.

129. George J. Hobe, snuff and tobacco.

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SECTION 2. Hair Work and Wax Work. Judges: Mrs. W. H. Gladwin, Mrs. Frank Morrill, Mrs. A. Dam, Mrs. S. Harmon, Miss Ann E. Dubois.

224. Mrs. H. E. Bert, hair flowers.

58. Miss J. E. Warren, wreath of hair work.

263. Mrs. C. M. Chapman, hair work.

344. Mrs. L. Schuck, hair work.

379. Mrs. De la Bar, hair flowers.

186. Mrs. M. E. Dougherty, human hair, perfumery, etc.

57. Miss Alice Schmidt, vase wax flowers.

66. Mrs. J. W. Thomas, five vases wax flowers.

95. Mrs. M. E. Gerrish, two cases and one vase wax flowers.

140. Miss M. Blanchard, two cases and one vase wax flowers.

162. Mrs. J. B. Fisk, one case wax flowers.

166. Mrs. W. B. King, one case wax fruit.

308. Mrs. A. E. Crane, one case wax flowers.

319. Mrs. J. B. Harmstead, six cases wax flowers.

328. Mrs. J. C. Rogers, case wax flowers.

331. Miss C. Taylor, case wax flowers.

332. Miss H. F. Badarous, case wax flowers.

377. Mrs. S. J. Hegeman, case wax flowers.

391. Mrs. C. Brown, Placerville, one case wax work.

18. Mrs. W. C. Wilson, case wax flowers.

344. Mrs. Benjamin Haynes, cases artificial fruit.

SECTION 3. Shell Work, Aquarium and Taxidermy. Judges: R. B. Woodward, Charles Steadman, O. Warner.

298. Mrs. L. Bigler, seaweed and shell work.

356. Mrs. Marianno, shell, frame and seaweed.

209. G. Kustel, galvanized specimens of birds, fruit, etc.

13. M. S. Feney, walrus' tusks and whales teeth.

27. E. F. Lorquin, stuffed birds, aquarium, etc.

100. W. E. Loomis, curiosities and shells from Sandwich Islands.

243. Mrs. W. P. Day, three cases shells

291. George Bloomer, five cases California shells.

SECTION 4. Miscellaneous. Judges: C. Steiger, J. H. M. Monagle, C. W. M. Smith.

38. John Whitman, two pairs elk horns.

88. H. Engel, jaw of shark.

91. J. C. Bender, sofa, showing the patent process of renovating colors.

106. Meyer & Co., samples of blankets, showing patent process of re-cleaning.

230. J. T. Jennings, one snuff box, made from piece of wood from bridge built in England by the Saxons in 1176, made by the exhibitor 43 years ago.

138. J. C. R. Fairweather, model of flying machine.

338. J. W. Angell, perfumery and fancy articles.

17. E. H. Willis, soda fountains.

48. E. Hawthorne, patent fire escape.

111. Gilmore & Van Norden, advertising frames.

263. Swyney & Smith "fountain fleet" invented at Fair.

264. Dr. J. P. Vandenburgh, jars tapeworms.

271. D. M. Hawley & Co., advertising frames.

286. Mrs. Butler, Continental paper money and Indian grain mortar.

295. Dr. R. J. Perrin, skull of sea-horse.

313. H. Olsen, combination swimming apparatus and life preserver.

348. J. Stapleton, autograph letter from General Washington.

355. L. P. McCarty, castle made from cards.

36. Governor Haight, of the State of Californir, Silver Medal awarded to the State of California at Paris Exposition of 1867, for cereals.

356. John S. Hittell, three books, "Resources of Calirornia."

. — Pacific Publishing Company, Wilson's prepared solder.

— A. H. Hall, Harmon's patent excelsior cigarette rollers, and patent cigarette wrappers.

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